From the makers of retro GAMER

The Commodore 64 Book™

Over 190 pages of 8-bit classics

The ultimate collector's guide

Classic games • Developer interviews • Rarest releases

Welcome to

The Commodore 64 Book™

It's hard to believe that it's been over 30 years since the venerable Commodore 64 was first released. For us, it seems like only yesterday that we were playing genre-defining games like *Impossible Mission*, *Uridium*, *Paradroid* and *Wizball*, flicking through issues of Zzap!64 and arguing blindly with our Spectrum and Amstrad-owning chums over who had the best machine. Some things never change.

While over three decades have now passed since the Commodore 64 made its debut, it remains a truly remarkable home computer, trailblazing its way through history thanks to its incredible SID sound chip, phenomenal library of classic games and huge support from both the US and European markets – a real rarity at the time.

In the Commodore 64 Book, we celebrate everything that was, and still is, brilliant about the machine, its games, and the people that made them. Whether it's looking back at some of the incredible music created with the SID chip, chatting with developers about how iconic games were made, or simply reliving some of our favourite C64 experiences, there is plenty within these pages to keep Commodore fans satisfied. Read on and enjoy.

In association with retro GAMER magazine

The Commodore 64 Book™

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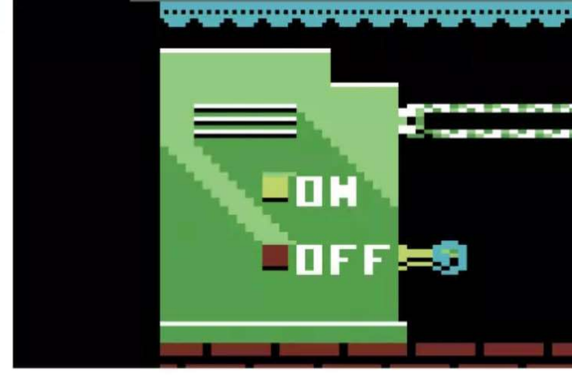

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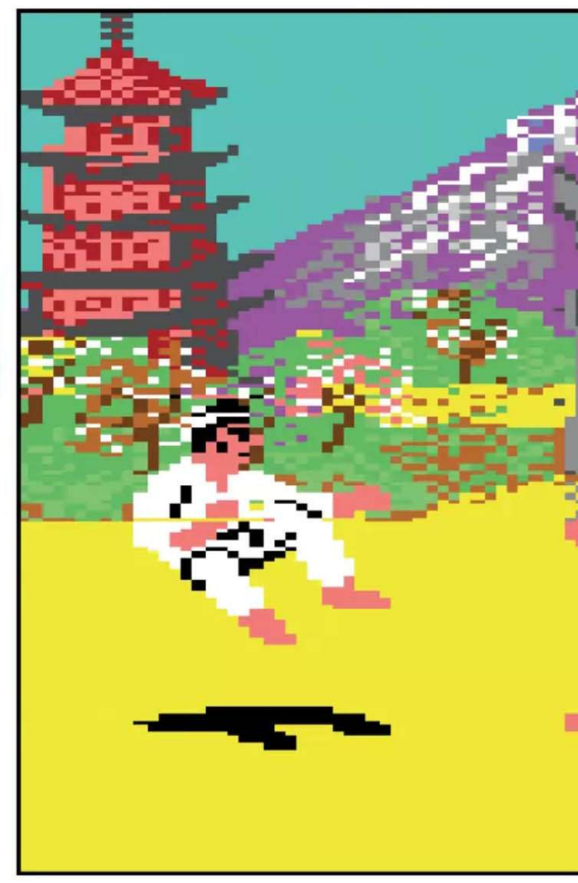

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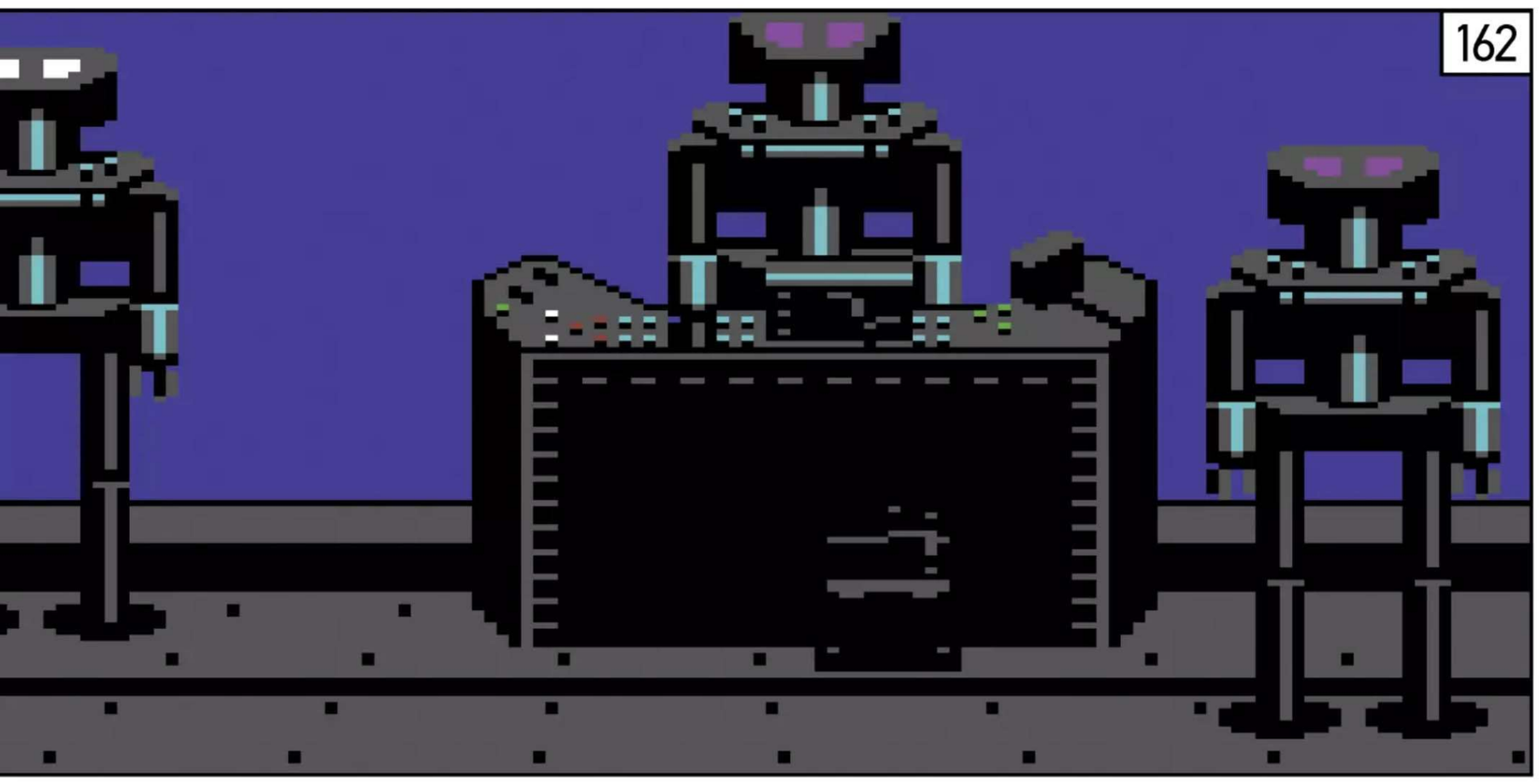

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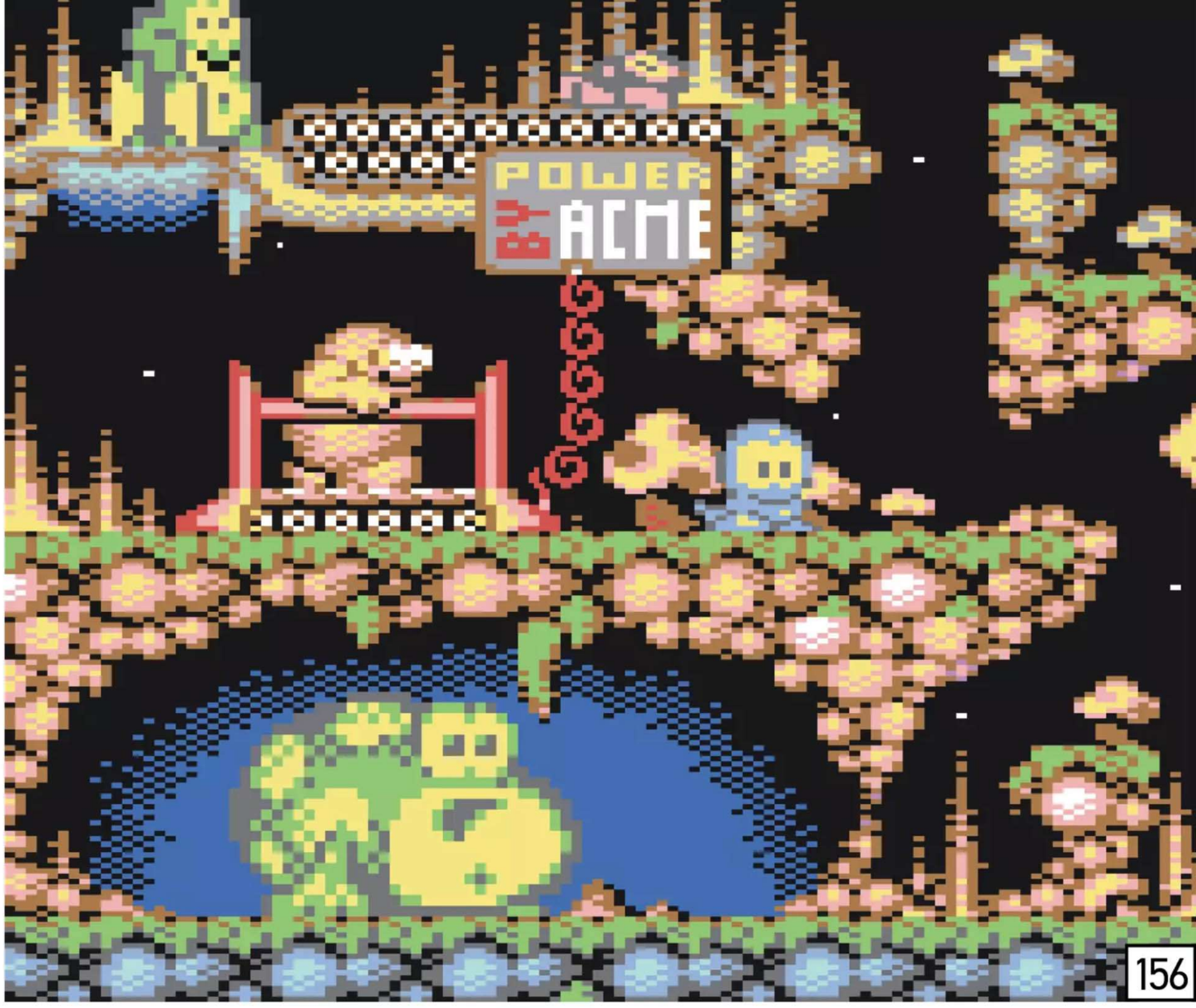

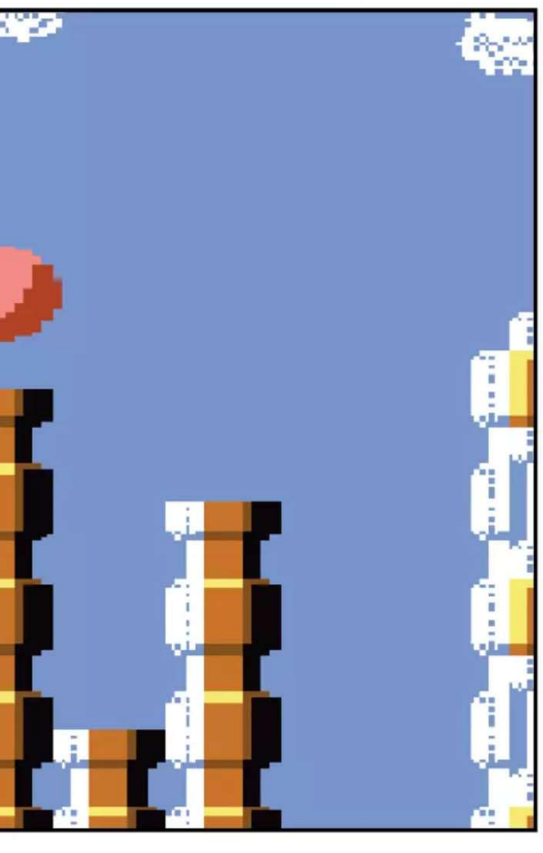

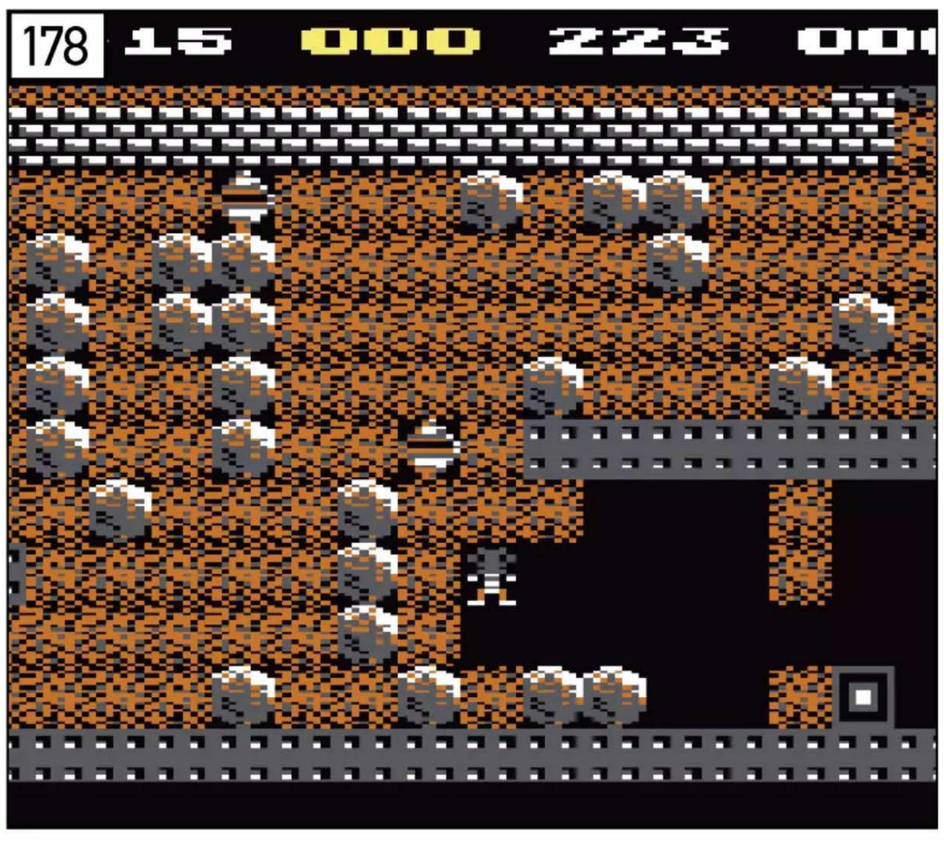

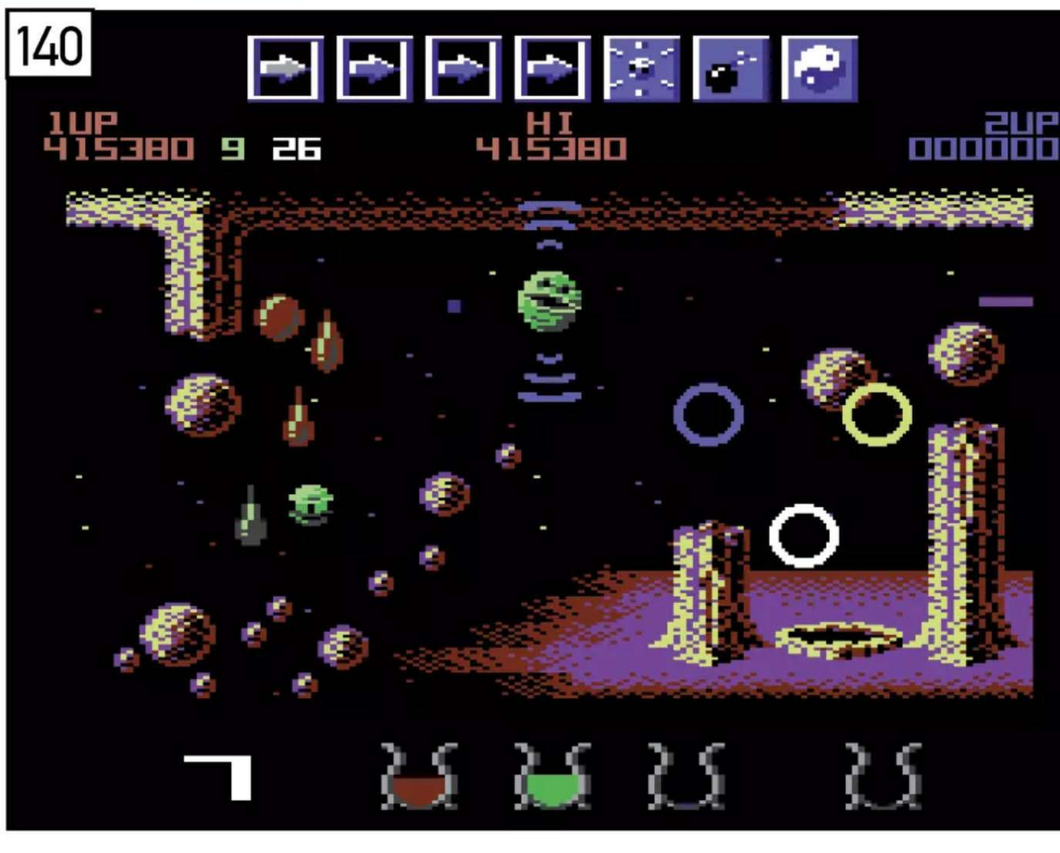

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Commodore 64 MicroComputer
High Resolution & Sound Synthesizer · Alta risoluzione grafica e sintetizzatore di suoni
commodore COMPUTER

Year Released: 1982

Original Price: August 1982 ($595) (USA), December 1982 (£349.99) (UK)

Buy it now for: £10-£15 (eBay)

Associated Magazines: Zzap!64, Commodore User, Commodore Format, Your Commodore

Why the C64 was great… The Commodore 64 was a jack-of-all-trades and a master of many. Success on both sides of the Atlantic meant its software library covered every genre, style and influence possible, with a panache most other machines struggled to equal. Despite Commodore's insistence on pushing it as a business computer with a price to match in the UK, it truly was the gaming platform to own. Even though it looked like a beige breadbin.

commodore 64

IT'S HARD TO BELIEVE THAT COMMODORE'S POPULAR 8-BIT HOME COMPUTER IS NOW 30 YEARS OLD. IT'S EQUALLY HARD TO IMAGINE WHERE WE'D ALL BE WITHOUT ITS GROUNDBREAKING GAMES AND STUNNING AUDIO CHIP. MAT ALLEN LOOKS BACK AT HOW ONE DECISION BECAME THE GENESIS FOR ARGUABLY THE GREATEST AND BESTSELLING HOME COMPUTER EVER

Commodore was not immediately looking for a successor to the Vic-20. The launch had been a bigger success than expected, and work on the newly commissioned video and sound chips was reaching a conclusion. The new VIC-II video chip was an improvement on the chip inside the Vic-20 and utilised (or borrowed you might say) features from other leading computers and consoles of the time. The SID sound chip was something new, a three-channel synthesiser that would end up blowing away the competition for years to come.

Both chips had been scheduled for use in arcade or dedicated videogames. However upon their completion in November 1981, Jack Tramiel, boss of Commodore, decided they would instead be used in the company's next home computer. A computer that he wanted to debut at the Las Vegas CES in January 1982. A computer that had yet to be designed! Not to be deterred, the new machine was designed in two days and five prototypes were built by the end of the year.

With the Microsoft BASIC of the Vic20 hastily rewritten for use on the new hardware, the machine was ready for show. Apart from the impressive specifications of the C64, which exceeded anything on the market, no one could understand how Commodore was proposing to sell it for just $595. Their jaws would have been through the floor if they'd known it would be initially manufactured for just $135.

The project and its inherent cost savings probably would not have happened without the acquisition of MOS Technology several years earlier. Not only did they have the expertise and experience, with many other companies using the 6502 CPU, but also the production line facilities enabled chips to be manufactured a lot cheaper and quicker than other companies could achieve. Using the same case and keyboard as the Vic-20 was another factor; aside from halving the cartridge slot size to make way for an internal modulator, the design of both was actually somewhat similar.

The C64 went on sale in August 1982 and was an immediate success. A few issues had been fixed before launch, and a few,

Not so big in Japan

Many people do not realise Commodore had launched the Vic-20 in Japan (as the Vic-1001) several months before it was available in the West in an attempt to acquire market share in the territory. With the imminent launch of the C64, Commodore had a second stab at Japan; however the aim was to sell an entry-level machine at a much cheaper price than the C64 would be in the US.

The resultant MAX computer, encased in a membrane keyboard, was hardware-wise very similar to a normal C64. To save costs there was no serial port, no monitor port, virtually no RAM and no internal OS, meaning for all intents and purposes it was a console with a keyboard. Games could only be loaded from cartridge, and the keyboard had little real use unless one of the limited programming modules was acquired.

Unsurprisingly the machine hardly sold and today commands a respectable collector value. Most of the games were programmed by HAL Labs (who are now with Nintendo) and are equally collectable. In a shrewd move, Commodore added a MAX mode to the C64 meaning that the cartridges will play fine on it.

"APART FROM THE IMPRESSIVE SPECIFICATIONS OF THE C64, WHICH EXCEEDED ANYTHING ON THE MARKET, NO ONE COULD UNDERSTAND JUST HOW COMMODORE WAS PROPOSING TO SELL IT FOR JUST $595"

commodore 64

One step beyond

Although technically superseded by the Amiga, the C64 was still going strong by 1990. Keen to capitalise on the machine's consistent popularity, Commodore commissioned an internal project to upgrade the computer for the new decade. The result was the C65, a machine with considerable power inside (such as the new VIC-III chip, VGA capability, greater RAM, and two SID chips for stereo sound), but with the ability to still play roughly three-quarters of the current C64 games.

Anticipation and excitement about the machine grew, as witnessed by copious letter writing to magazines at the time. And then for whatever reason it was cancelled in mid-1991, apparently at the request of then chairman Irving Gould in deference to keeping the C64 alive. The potential that the machine offered would never be realised.

That was not to say no one would get to play with the hardware. When Commodore was liquidated in 1994, many of the machines housed at its Toronto office sneaked out into the general domain and were rapidly grabbed by fans and collectors, though it was soon found many were in various states of completion and revision. Today it remains an interesting curio, one sadly that never came to be.

including the notorious "sparkle" effect, would be dealt with in the months immediately after. Most of these were fixed by the time the second revision (B) motherboard was produced. Revision A machines are today hard to find (estimated less than 0.2% of the 25 odd million production run) and are collectable because of their quirks and bugs.

From the off it was obvious Commodore (aka Tramiel himself) meant business and was going for the throats of the competition, especially Atari. The price of the C64 was down to $395 before Christmas, and was under $200 by 1985, with manufacturing costs cut by two-thirds. By that time the C64 was the home computer to own in the US. This was in contrast to the UK, where Commodore's operation was a little less price conscious. It stayed above the £200 mark for a long time, and peripheral prices were of a similar nature; at one point the disk drive cost more than the machine itself!

"JAWS WOULD HAVE BEEN THROUGH THE FLOOR IF THEY'D KNOWN IT WOULD BE INITIALLY MANUFACTURED FOR $135"

This does seem strange given the Commodore 64 had far more competition in Europe than in the US, especially from the Spectrum. Whilst the C64 won the hearts of gamers in the Netherlands, Germany and Scandinavia, it was beaten to number one in several other countries including the UK, France and Spain. In the UK the battle was always with the Spectrum. At almost half the price for much of the Eighties, the Spectrum was a cheaper alternative that was also home to many classic games.

Why pick the C64 over the Spectrum? Anecdotal evidence points to its form and function as much as its power (the "real" keyboard being a selling point), with the price tag partly seen as a badge of status. Playground battles would be fought with both sides arguing their case, with levels of tribal loyalty and dedication rarely seen since. Technically the C64 was streets ahead, but there were aspects where the Spectrum was superior. That was mainly isometric adventures, such as those perfected by Ultimate, and anything vector graphic driven. The design of the C64 was not suited to either. That wasn't to say it couldn't be done, as the classic *Mercenary* and the conversion of *Head Over Heels* demonstrate. The C64 made a better stab at anything coming its way from the Spectrum compared to anything going the other way.

However C64 users in the UK didn't just have to rely on homegrown games to satisfy their needs. From early on, they were able to sample the delights of American games, courtesy of companies such as US Gold and Ariolasoft releasing or importing them for sale. Some users, though, would take to importing the games themselves. Quite often this would be the case with some high profile titles, until the companies in question (Infocom, we look at you) decided to send them over here.

For the first couple of years of the C64's life, games from the likes of Epyx, Access, Synapse, Broderbund and Infocom were better than almost anything programmed in Europe. Watching *Impossible Mission*, *Beach-Head*, *Choplifter* or *Lode Runner* being demonstrated was amazing. This was also a time when Electronic Arts published innovative games such as *M.U.L.E.*, *Racing Destruction Set* and *Skyfox* instead of bundles of shovelware. Thankfully programmers this side of the pond got their backsides in gear and started matching the imported efforts.

You have to begin with Jeff Minter, creator of weird addictive programs, who was given a C64 very early on as part of his deal with HES in the US. The three games *Ancipital*, *Revenge Of The Mutant Camels* and *Iridis Alpha* are some of his best work, and would have been hard to achieve on any other platform. He was just the first of many developers, as Tony Crowther (*Loco*, *Blagger*), Geoff Crammond (*Revs*, *The Sentinel*), Archer Maclean (*Dropzone*, *IK*), Jon Hare and Chris Yates (*Parallax*, *Wizball*), and Paul Woakes (*Encounter*, *Mercenary*) would all follow.

Just as can be seen between Western and Japanese game design today, there was a similar dichotomy in games produced here and over there. Different influences, different cultures, different trains of thought. There was also another good reason for why the US produced the majority of the RPGs, strategy games and adventures: the disk drive. By 1984 the datasette had all but been abandoned by users and publishers alike in the US, whereas in the UK it was seen as a cheap method of storage pioneered by the continued success of other computers. There are numerous examples of two versions of a game being written, one example being the movie tie-in *Aliens*. The Electric Dreams UK version is a first-person adventure type affair, whereas the Activision US release is multiload, and portrays the whole film in various stages. In terms of execution, the UK version recreates the terror of the film, whereas the US version is more "big-budget" but far less effective in its execution.

Like it or loathe it, the tape format would define the games written in the UK for the first few years of the C64's life, until the inevitable progress and demand for bigger games forced more multiload antics onto the hapless users. Let's face it, tape wasn't really cut out for that sort of access, but with the introduction of fast loaders into the UK

» C64 owners finally got a taste of Julian Gollop's genius when this masterpiece of strategic turn-based warfare was released for formats other than the Spectrum.

» No hardware is ever immune from controversy, and these three games are proof positive the clones can be as good as the real thing: *Cuthbert In The Jungle*, *Katakis*, *The Great Giana Sisters*.

» Using the flexibility of the disk drive, there were some terrific and unique ideas prevalent on the C64, including this trio of releases from Activision: *Alter Ego (top left)*, *LCP (above)*, *Portal (bottom left)*.

NO MORE
Intercorp announced the elimination through hybridoma antibody manipulation of the last viral disease January 4, 2042. Mutagenic characteristics of viral DNA irrelevant to human pathogenesis remain outside the scope of disease-oriented research. Medical AI maintains full-health status quo as of January 1, 2073. Only new genetic diseases remain as worldwide health risks.
FOCUS
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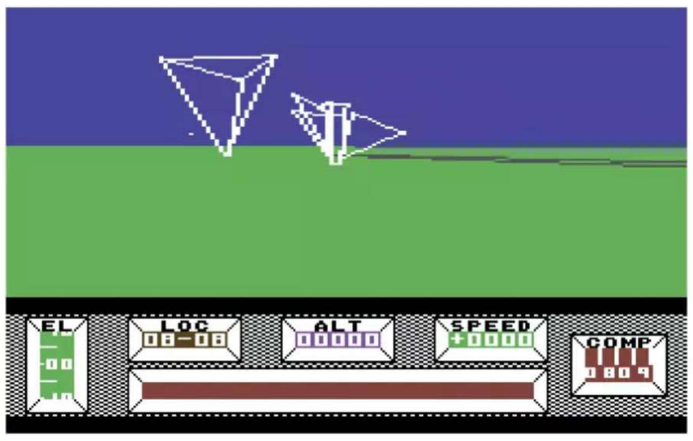
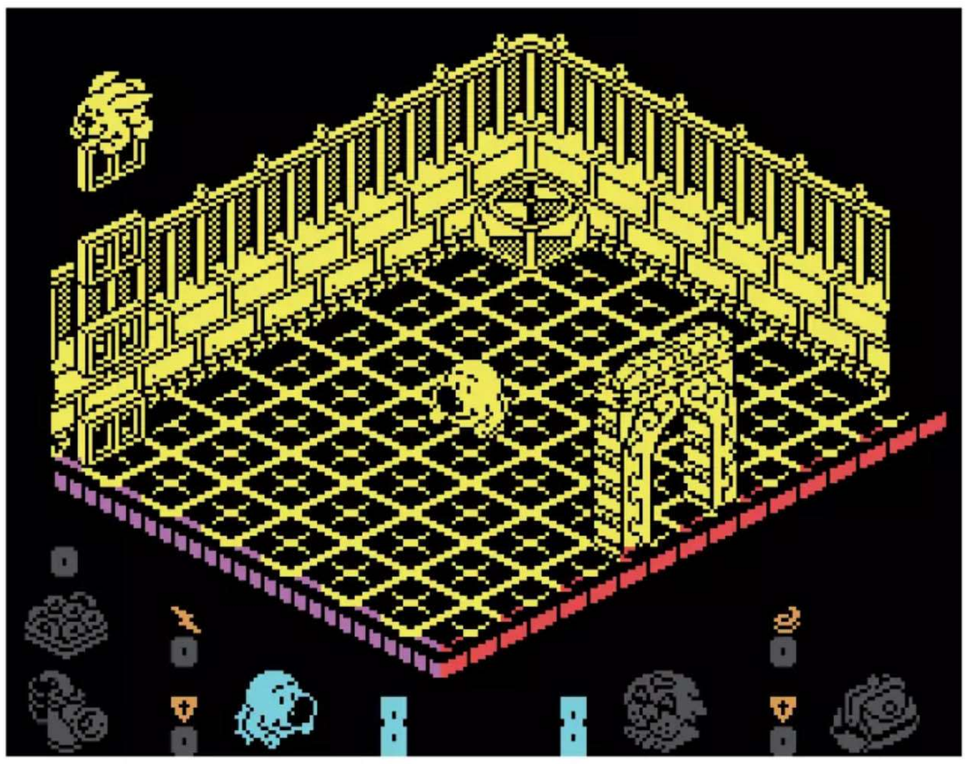


» Paul Woakes needs to be tracked down to explain just how he managed to fit a whole world of wonder into 64K of RAM. Who says the C64 can't do vectors?

» A Spectrum conversion you all cry? For sure, but the C64 showed it was equal to the task of running the best software its rival had to offer.



» All the Bs for arcade conversions, this set of three were some of the best realised on the limited, by comparison, hardware: Buggy Boy, Bionic Commando, *Bubble Bobble*.

(another pioneering moment from Jeff Minter), things became a little more bearable.

Even at the peak of its popularity, it has been said that only around 10% of all C64 owners had a disk drive. Which by the powers of deduction means 90% were stuck with tape loading only. As mentioned earlier, this was mainly down to Commodore's high pricing policy in the UK. Hence to accommodate this fact, it is no surprise that a lot of games were designed for single load only, squeezing as much as possible into that 64K (or less). The benefit to those who had access to both formats is obvious; the C64 repeatedly delivered quality games in all genres and interests and wasn't confined to a subset of possibilities.

Those Commodore 64 owners out there are already no doubt counting on their fingers all the games they loved and separating them into single and multi load. Unless you had a disk drive fairly early on, it would be expected that the single loaders are going to win out here. Anyone who played *Turbo Outrun* on tape will know how excruciating it could be (having said that, before fast loaders appeared, loading from disk was almost as bad). Sometimes it was done right; having the next level load during sequences in *Dragon's Lair 2* or *Hawkeye* for example, or playing a small mini-game such as *Invaders* or *Painter*. It also gave rise to the "loader tune" to occupy gamers as they patiently waited for their latest epic to dribble into memory. Music for the C64 would turn out to be probably the defining point of its lifespan.

Aside from tapes and disks, the C64 could also use cartridges. Despite the number of games available being tiny compared to the overall catalogue (just some 300 odd releases), there were some great titles to be had, though many of them were only available on that format, and only available in the US. US Gold did some balancing by releasing some of the Sega titles in the UK, Atarisoft published a few of their own in Europe, and HES released games on tape, but the majority stayed behind.

Most of Commodore's own efforts can be ignored, although *International Soccer* is impossible to avoid, and *Wizard Of Wor* is one of the best conversions available for the C64. Other titles people should look to grab from abroad include *Gyruss* by Parker Bros, *Diamond Mine* by Roklan, *Moondust* by Creative, *Maze Master* by HES and *Jumpman Junior* by Epyx. Look to Australia and cartridge versions of classics including *Leaderboard* and *Ghostbusters* can be found, as Home Entertainment Suppliers had a licence to produce them in the late Eighties.

"EVEN AT THE PEAK OF ITS POPULARITY, IT HAS BEEN SAID THAT ONLY AROUND 10% OF ALL C64 OWNERS HAD A DISK DRIVE"

Not all the important cartridges were games however. Anyone with a disk drive needed a utility cartridge to go with it, and examples such as Datel's Action Replay, the Final Cartridge, the Expert and Super Snapshot were all good sellers. They not only performed quick copying of disks, but enabled pokes to be entered, had built-in fast loaders, allowed easy use of disk commands and more. In today's disk heavy environment, they are an even more vital necessity.

The other essential weapon was the review magazine. After the success of Crash for Spectrum

» Before *Micro Machines* came *Slicks*, a very similar game, and one of the best overhead racers available for the C64.

"SID IS UNIQUE. THERE WAS NOTHING LIKE IT BEFORE AND THERE HAS BEEN NOTHING LIKE IT SINCE"

» **Above:** RPG fans were well catered for, with releases from Interplay, SSI, Origin and Electronic Arts, and more recently the massive 14 disk home-brew epic *Newcomer.*

owners, Newsfield launched Zzap!64 in April 1985, and for the next three or so years, it was the best thing on the planet – if you were a C64 owner that was. With the attack of pointy hair and pointed words from the twin terrors of Gary Penn and Julian Rignall, gamers felt safe that if they said something was good, then it was going to be good.

The magazine lost its way after that point due to various changes, but was always a good read even if it had lost some of its magic. Coming late into the show was Commodore Format, which didn't launch until the end of 1990 when the C64GS was released. Zzap!64 had never really had a proper rival until then, so late in the C64's life, there was suddenly some real competitive spirit. Format lasted until 1995, which was some going for a magazine with an 8-bit theme.

Despite the effort of magazines to keep gamers on the straight and narrow, some people still bought duff software. But there was method to the madness; it was all to do with the music. It may seem strange, but some games (*Comic Bakery*, *Miami Vice*, *Rambo* and *Knucklebusters*) despite being less than great, still sold rather well due to exceptional SID tracks. Music more than anything else elevated the C64 above its contemporaries and made playing games more than just bleeps and bloops. Where else has one chip inspired countless remixes, paid-for music albums, samples in commercial records, organised concerts and a professional mixing/composing station?

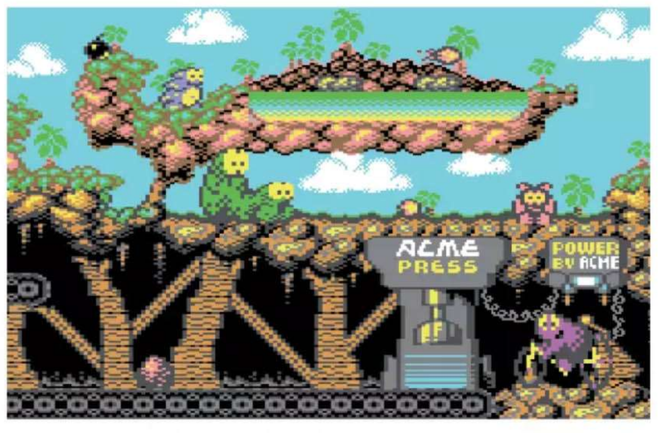
SID is unique. There was nothing like it before and there has been nothing like it since. There is a distinctive form to its sound, and those musicians capable of extracting the most from it were almost heralded as gods at the time. Be it the frantic fast paced nature of *Monty On The Run* (Rob Hubbard), the psychedelic trippy *Parallax* (Martin Galway), the oriental themes of the *Last Ninja* (Ben Daglish and Anthony Lees), the industrial drum based rhythms from Matt Gray or Steve Rowlands' bouncy house-like tracks, there was something for all. Melody was key; many classic SID tracks are instantly hummable and maddeningly catchy.

Samples, in the form of instruments or voices, as part of the music became popular after Martin Galway and Chris Hülsbeck started using them in compositions in 1987. When utilised homogeneously, in such pieces as *Savage* and *Turbo Outrun* by the Maniacs of Noise or *Combat School* by Galway, they really added something to the end production. Unfortunately Commodore fixed the bug in the 6581 SID chip that allowed samples to be played for the 8580 revision, meaning they became very quiet. Fortunately there is a solution available to fix this "problem".

With the graphics, music and games making the C64 a global success, it may not be surprising that all of Commodore's 8-bit hardware that followed never came anywhere close. You could say that was partly due to its popularity – people saw no need to change, apart from going onwards to the Amiga or Atari ST. For example, the C16 and Plus 4 were nice machines but only ever occupied a niche market space that disappeared once the price of the C64 came down.

Whereas the C128 on paper looked an interesting prospect, the idea of a better equipped C64 with twice the memory and processor speed could have been seized upon by developers but never was. Very little C128-only software was written as users voted with their wallets and stuck with the C64 instead. Early on in the C64's life, Commodore marketed the SX64, an alleged portable version (or not, if you've ever tried carrying one about) of the hardware with a built-in monitor and disk drive. However with an initial price tag in the US of just under $1,000 (and a similar value here), it was never destined to sell in large amounts. Having said that, it isn't difficult to find them being sold privately today in the US or Germany.

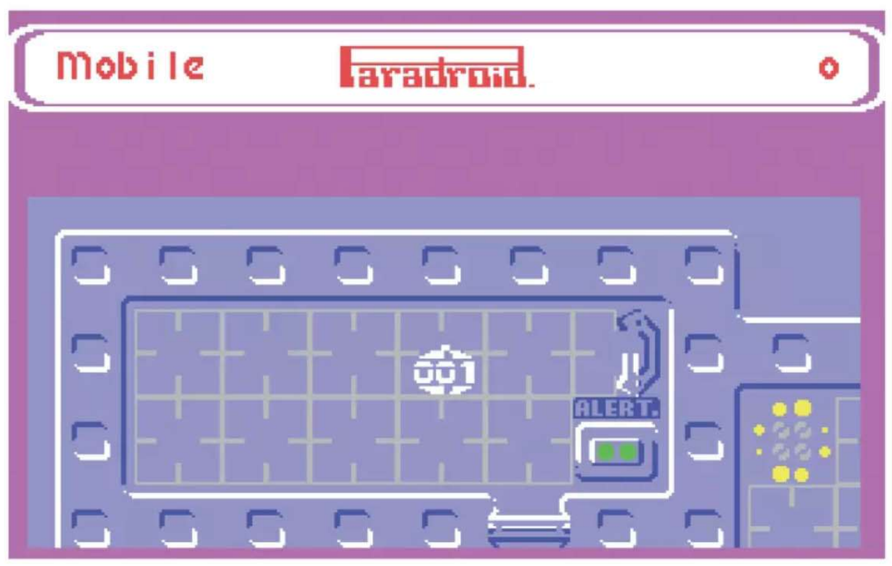
Commodore's biggest error was trying to compete for the space occupied by Sega and Nintendo in the console market. It is similar to the mistake committed by Amstrad with the GX4000. The idea of attracting those users across was sound, but in true Commodore fashion, it got the execution horribly wrong. The main problem was the price of the new C64GS (Games System) unit: at £100 it was only just less than a normal C64 bundle. The joystick included with the console was horrible, and with the lack of keyboard, many of the older cartridges could not be played properly. It did kick off the interest in cartridge based games again, albeit briefly, and there



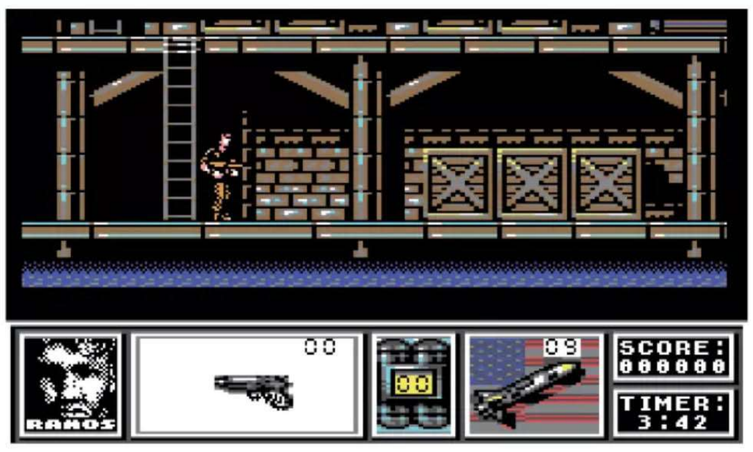
» The C64 was still home to new development talent into the Nineties as witnessed by the Rowlands brothers' games, which always had the highest production values possible.

» Sensible Software was known for producing unsensible games, including the two that kick-started its success: *Parallax* and *Wizball.*

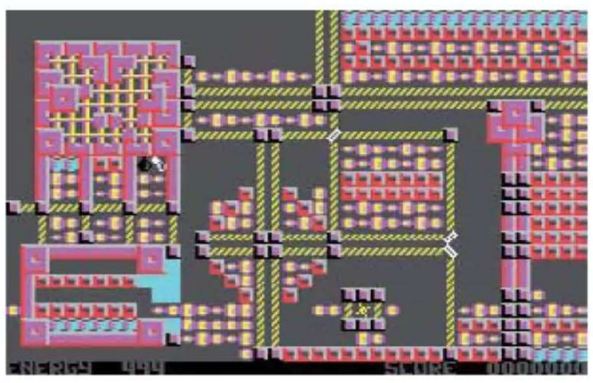
» Jeff Minter was behind the C64 after progressing from the Vic20, and all of his games for the machine have a unique quirkiness about them.



» Indescribably brilliant, and a concept seldom used since. Control the influence device to destroy or takeover all of the rogue droids aboard eight ships.



» Just about every C64 owner will have played *International Soccer* at some point, but there were other great cartridges to get including the conversion of *Wizard Of Wor* and Ocean's range for the 64GS.



» Just because it was budget did not mean it was bad. There were a number of undiscovered gems including *Spore* and *Warhawk*, plus the best-value game ever, *Thrust*.

were some excellent new titles available for a slightly higher than expected price tag – the majority coming from Ocean.

There was also a lot of confusion at the time as many people thought the new cartridges would not actually work with a normal C64; as a remedy many games had stickers positioned prominently on the front, pointing out they could be used with any machine. In the end roughly a third of the 100,000 units manufactured were sold, while the rest ended up being broken down for use in C64C models instead.

The C64 had already gotten an update in its own right in 1987 with the introduction of a new slim-line design to match the Amiga, and a slight name change to the C64C. The internals of the machine were redesigned and decreased chip wise along with the aforementioned SID revision, although some early C64C models do have the 6581 inside. It was still business as usual for sales, and the C64 kept selling and kept being popular despite the release of vastly more powerful hardware and consoles experiencing a resurgence. It was also a reason why the C65 project was cancelled (see boxout).

Where the C64GS had failed in attracting the next generation, the ordinary C64 succeeded. With the turn of the decade, interest in the ageing technology would be expected to decrease, and yet a new wave of younger users was just taking their first steps. On their heels was a new set of programming talent looking to keep the machine alive, and maybe show a few tricks that established teams would utilise themselves. If games such as *Turrican*, *Turbocharge*, *Mayhem In Monsterland*, *Battle Command* and *Elvira 2* had been released earlier in the machine's lifespan, who knows where development could have led. What is certain is that constant innovation and experimentation with the hardware made it do things the designers never conceived as being possible.

In 1993 Commodore announced it was finally halting production of new C64 units. Eleven years is a very long time in today's terms for manufacturing essentially the same piece of hardware. It even managed to outlive Commodore's own demise the following year, as commercial software was still available to buy into 1995. From then on, it was the era of home-brew and fans supporting Commodore's popular machine.

Home-brew is merely a technical term for it, as unlike the Atari 2600 or NES, ordinary users were programming their own games and selling them (and many did) since the launch of the C64. Without the support of retail shops, it meant distribution went back to being word-of-mouth, mail order and private advertisements. In the last ten years, thanks must go to Russ Michaels (Electric Boys Software) and Jon Wells for pioneering the process and today there are several groups releasing "for money" software including Protovision and Cronosoft, along with many others doing it for free.

"CONSTANT INNOVATION AND EXPERIMENTATION WITH THE HARDWARE MADE IT DO THINGS THE DESIGNERS NEVER CONCEIVED AS BEING POSSIBLE"

One thing is also certain: a disk drive is an essential part of owning a C64 today and is now highly affordable. With the efforts of groups such as Gamebase64 and individuals such as Peter Rittwage to document and preserve all games ever released, and cables available from various outlets, programs can be transferred from PC to real floppies easily to play on a proper C64. Many new game releases are disk only. Like many other 8-bit machines, the future is still active and bright for hardware celebrating its thirtieth birthday.

I want my DTV

The origins of the DTV (Direct-To-TV) unit lie with the C-One project, created and designed by Jeri Ellsworth. Conceived as a way to emulate the C64 as closely as possible through software, it eventually progressed into a platform capable of handling many other formats due to the unique nature of its powerful design.

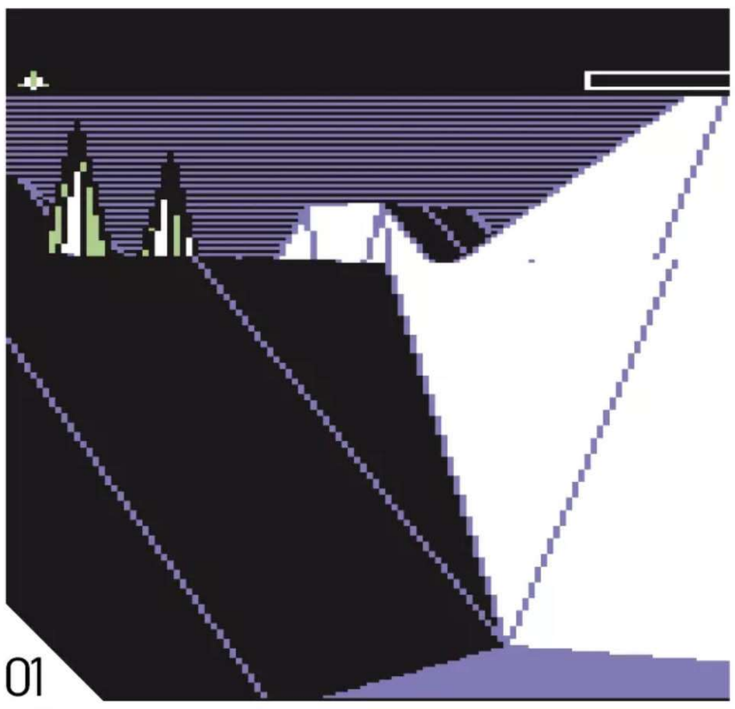
Although the C-One was aimed at a developers' market, it did not go unnoticed. Mammoth Toys signed a deal with Ellsworth to produce a computer-on-a-chip version for use in a self-contained games joystick, similar to many already sold by companies such as Jakk's Pacific. With the project completed in a few months, it went on sale just before Christmas 2004 and sold more than a quarter of a million units.

The later PAL version has several improvements and a more refined games line-up, making it the preferential choice of purchase. Not only are there several Easter eggs to find, the unit is also fairly easy to hack and alter due to its C-One origins, meaning amongst other things, new software can be loaded into the unit and extra joystick ports added for two-player games. The C64 lives on, though maybe not quite in the format people expected!

commodore 64

PERFECT TEN GAMES

The Commodore 64 has a staggering selection of great games across a number of different genres, so choosing a top ten was always going to be a tricky process that required a lot of thought. Below then are a selection of the best games on the system. How many of them have you played?



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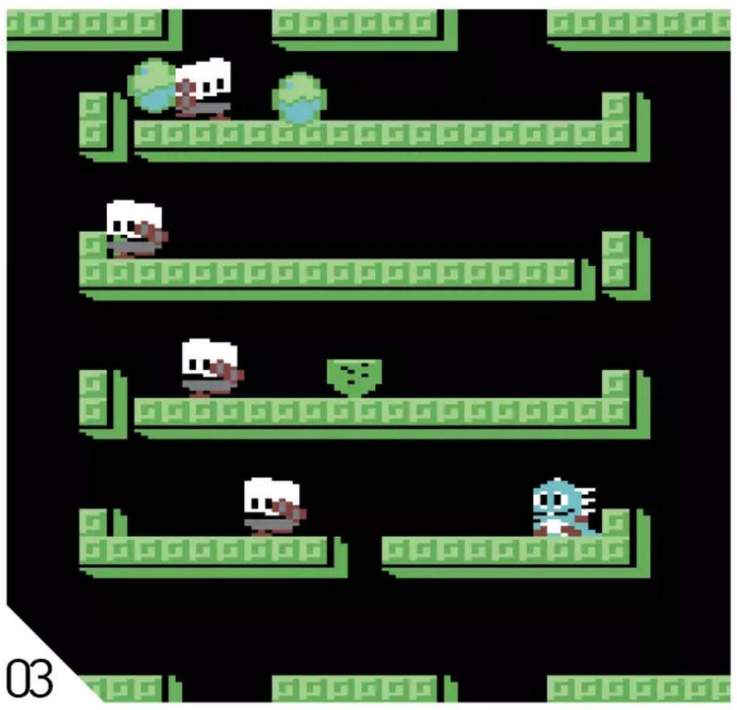

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THE SENTINEL

» **RELEASED:** 1986
» **PUBLISHED BY:** FIREBIRD
» **CREATED BY:** GEOFF CRAMMOND
» **BY THE SAME DEVELOPER:** STUNT CAR RACER

01 Geoff Crammond's name may be synonymous with racing games, but when he wasn't pouring his heart and soul into his latest *Grand Prix* title, he was adept at turning his hand to all sorts of different genres, with *The Sentinel* being a perfect example of his handiwork. Haunting and with a meticulously designed game engine that excels at giving a tremendous sense of scale and depth, Crammond's *Sentinel* was one of the best strategy games available on the C64 – although to be fair, it initially appeared on the BBC Micro – and even today it offers a worryingly addictive challenge. Best of all, the beauties of emulation mean that you no longer have to endure those lengthy screen loads all the time. What a result!

IK+

» **RELEASED:** 1987
» **PUBLISHED BY:** SYSTEM 3
» **CREATED BY:** ARCHER MACLEAN
» **BY THE SAME DEVELOPER:** MERCURY

02 There had been previous games involving the slamming of bodily appendages against each other, in a sweaty contest of stamina and skill, but it was Archer Maclean's *IK+* which was first to ménage-à-trois with the concept – metaphorically speaking. It revolutionised the mechanics of games like *Way Of The Exploding Fist* and *Karate Champ*, and also incredibly well on the humble C64. Music was by Rob Hubbard and while there was only one background, it was filled with many clever Easter Eggs (those joyous bonuses you could spend months discovering). The fluidity of control made it easy to initially play, but this was backed-up by a complex system which rewarded continued practice. A classic.

BUBBLE BOBBLE

» **RELEASED:** 1987
» **PUBLISHED BY:** FIREBIRD
» **CREATED BY:** SOFTWARE CREATIONS
» **BY THE SAME DEVELOPER:** SLY SPY: SECRET AGENT

03 There have been plenty of classic coin-op conversions on the Commodore's mighty 8-bit, but *Bubble Bobble* ranks as one of the best to make the jump. From its cute, vibrant – if slightly squashed looking – visuals to the outstanding, bouncy music, the C64 managed to perfectly capture the spirit of the original arcade hit and proved to be the perfect game to show-off to your Spectrum and Amstrad owning mates. It might not feature all of the secrets that appeared in the original arcade game and having to press up on the joystick in order to jump is no substitute for a proper, dedicated fire button, but if you're looking for an extremely competent conversion of a classic arcade hit, look no further. A superb conversion that shouldn't be missed.

MAYHEM IN MONSTER LAND

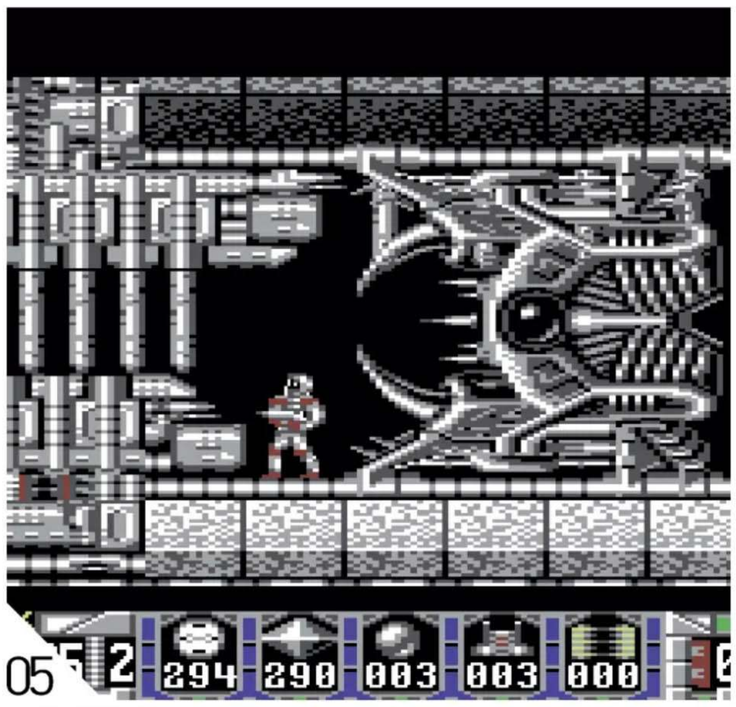
» **RELEASED:** 1993
» **PUBLISHED BY:** APEX COMPUTER PRODUCTIONS
» **CREATED BY:** CREATURES 2
» **BY THE SAME DEVELOPER:** CREATURES

04 There was no question of this not making the Top 10, what with it being regarded by many as the C64's last great release both in terms of gameplay and sheer technical achievement. As most already know, it infamously used a "bug" in the graphics chip, which allowed entire screen scrolling and therefore much smoother and faster gameplay. Despite being a C64 title it has all the speed and tactile control you'd expect from an early 1990s platformer, which not only guarantees it a place here but also means it's still great to play even today. Being a dinosaur and returning colour to the land has never been such fun.

TURRICAN

» **RELEASED:** 1990
» **PUBLISHED BY:** RAINBOW ARTS
» **CREATED BY:** MANFRED TRENZ
» **BY THE SAME DEVELOPER:** THE GREAT GIANA SISTERS

05 There's an unwritten law in videogames that states: all C64 lists must feature at least one Manfred Trenz game. While many will no doubt argue that Trenz's *Turrican II* is clearly the better game, we've decided to stick with the original, mainly because there was nothing quite else like it when it first appeared in 1990. It may well have borrowed heavily from obscure coin-op *Psycho-Nics-Oscar*, but Trenz's technical wizardry of Commodore's machine simply blew us away, and it still manages to impress today. Part platformer, part shooter, *Turrican* features incredible visuals, a stunning score by music maestro Chris Hülsbeck and some of the most frenetic gameplay around. It fully deserves every accolade that has been bestowed on it.



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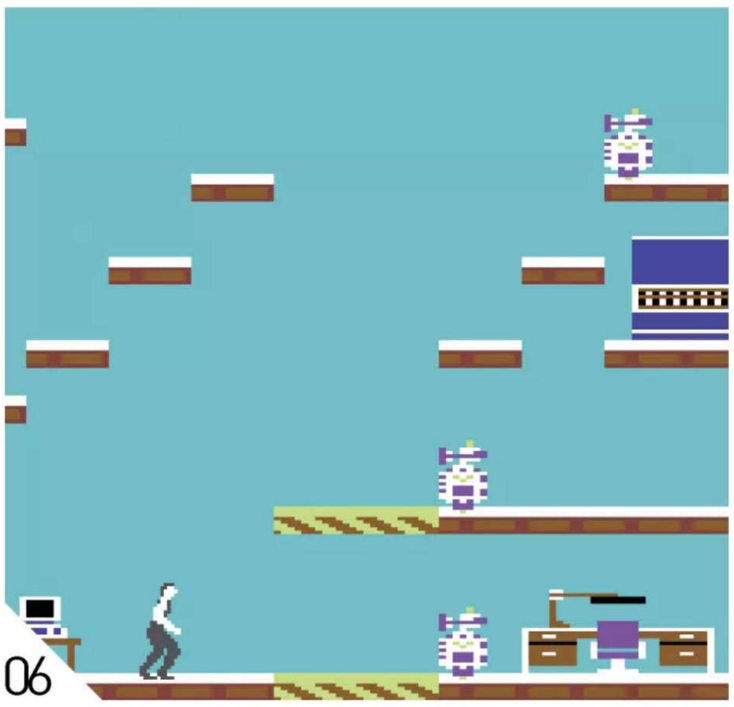
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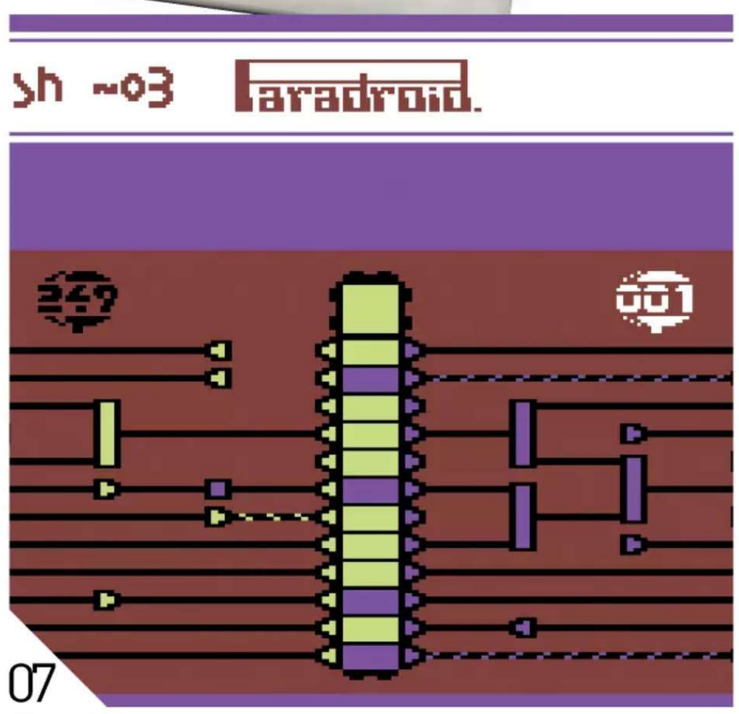

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IMPOSSIBLE MISSION

» **RELEASED:** 1984
» **PUBLISHED BY:** US GOLD
» **CREATED BY:** DENNIS CASWELL
» **BY THE SAME DEVELOPER:** PHASER PATROL

06 We featured a Making Of article on Dennis Caswell's timeless classic in Issue 22 of Retro Gamer, so by now all of you should have had a chance to experience this classic game. *Impossible Mission* was a perfect blend of joystick waggling dexterity (especially when avoiding the terrifying spheres of floaty-electric-death), and also tricky puzzles (many had problems with the final password-piece assembly). Although its premise of searching furniture (to find those elusive passwords) and avoiding robots may sound nauseatingly simple, it made for a game, which was easy to get into but difficult to put down. Although ported to several other systems, for us the C64 original is still the best version.

PARADROID

» **RELEASED:** 1985
» **PUBLISHED BY:** HEWSON
» **CREATED BY:** ANDREW BRAYBROOK
» **BY THE SAME DEVELOPER:** URIDIUM

07 Ask any C64 owner to name their favourite games, and chances are that this superb effort from Andrew Braybrook will almost always make their top five. Taking control of a weak prototype droid, your aim is to simply clear each boarded spaceship (of which there are eight) of its out-of-control robots. While your droid is woefully underpowered (even Dusty Bin could have it in a scrap) it does retain the unique ability to transfer itself into any available droid (albeit for a limited amount of time). This enables it to take out the ship's more dangerous foes (via a charming mini-game) and adds an interesting play mechanic. With its subtle blend of strategy and blasting, *Paradroid* is a true classic, and deserves to be in every C64 owner's collection.

WIZBALL

» **RELEASED:** 1987
» **PUBLISHED BY:** OCEAN
» **CREATED BY:** SENSIBLE SOFTWARE
» **BY THE SAME DEVELOPER:** PARALLAX

08 Playing *Wizball* was a rite of passage for many Commodore 64 owners and became more than ample ammunition for those who wanted to taunt their CPC and ZX Spectrum owning peers. Insanely smooth scrolling, a scintillating soundtrack from the always dependable Martin Galway and its slick blending of genres means that *Wizball* will forever remain within the higher echelons of Commodore 64 classics. It might well have taken a while to get used to your ball's incessant bouncing motion, but once you finally mastered it and collected a few power-ups *Wizball*'s true identity and depth are revealed. It is, quite possibly, one of the most beautifully crafted C64 games that you'll ever have the privilege of playing.

PROJECT FIRESTART

» **RELEASED:** 1989
» **PUBLISHED BY:** DYNAMIX
» **CREATED BY:** ELECTRONIC ARTS
» **BY THE SAME DEVELOPER:** RISE OF THE DRAGON

09 Many games claim to have pioneered the survival-horror genre but, while others certainly came before it, *Project Firestart* is one of the very best examples of the early genre, and is still supremely enjoyable today. Your task is to dock with a research vessel in space and find out why there's been no communication. From the start, when you see the body of a dead crewmember who has written the word "danger" in their own blood, you know it's going to be an incredibly tense mission with plenty of twists and turns. Throughout the ship are mutilated bodies, log reports, even a survivor; then you encounter the terrifying invisible enemies, which randomly appear. Multiple endings guarantee regular returns to that hellish place.

ZAK MCKRACKEN AND THE ALIEN MINDBENDERS

» **RELEASED:** 1988
» **PUBLISHED BY:** LUCASARTS
» **CREATED BY:** IN-HOUSE
» **BY THE SAME DEVELOPER:** MANIAC MANSION

10 It's only fair that we list one of Lucasarts' excellent games here. But we can already hear a great disturbance, as if millions of voices suddenly cried out in terror, due to our divisive choice. Yes, we could have listed *Maniac Mansion*, but everyone knows *Maniac Mansion*. *Zak McKracken* is arguably just as good, and the journalistic setting struck a chord in the office. Traversing the entire globe Zak encounters aliens disguised with Groucho Marx style nose-glasses and cowboy hats. Throw into the mix wacky sidekicks, a bus which travels to mars, plus some bitingly witty newspaper headlines, and you have one hell of a crazy adventure.

commodore 64 and the rest...

Loved by all who were fortunate enough to own one (and coveted by those who weren't) Commodore's C64 is one of gaming's greatest success stories and boasts a stunning array of classic titles. How many did you own?

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01 ARCHON
02 HARD HAT MACK
03 JOHN MADDEN FOOTBALL
04 SKATE OR DIE!
05 WORMS?
06 KUNG-FU MASTER
07 RICK DANGEROUS
08 WIZBALL
09 YIE AR KUNG FU II
10 TURRICAN
11 STREET FIGHTER II
12 OUTRUN
13 A VIEW TO A KILL
14 DOUBLE DRAGON III
15 THE NEW ZEALAND STORY
16 ROBOCOP
17 CAULDRON
18 ZAK MCKRACKEN
19 BACK TO THE FUTURE
20 GHOSTBUSTERS
21 PARADROID
22 LAZY JONES
23 TRON
24 YIE AR KUNG FU
25 SMASH TV
26 MAYHEM IN MONSTERLAND
27 JACK THE NIPPER
28 ARNIE
29 G.I. JOE
30 FORBIDDEN FOREST
31 DIEHARD
32 DIZZY
33 ALIEN 3
34 EXOLON
35 LAST NINJA 3
36 R-TYPE
37 ROBOTRON 2084
38 GOLDEN AXE
39 LAZER SQUAD
40 RAINBOW ISLANDS
41 M.U.L.E
42 1942
43 GHOULS 'N GHOSTS
44 LITTLE COMPUTER PEOPLE
45 STREET FIGHTER
46 VIGILANTE
47 WONDERBOY
48 ALICE IN WONDERLAND
49 CARGO
50 CHOPLIFTER
51 STRIDER
52 RYGAR
53 THE ADDAMS FAMILY
54 IMPOSSIBLE MISSION
55 RUSH'N ATTACK
56 BATMAN
57 CHUCKIE EGG
58 METAL GEAR
59 CASTLEVANIA
60 - 720 DEGREES
61 EXILE
62 LETHAL WEAPON
63 CJ'S ELEPHANT ANTICS
64 STARFOX
65 NINJA WARRIORS
66 XOR
67 GUN SMOKE
68 RAMPAGE
69 DAN DARE
70 BELOW THE ROOT
71 TERMINATOR
72 SANXION
73 RETURN OF THE JEDI
74 XENON
75 DEMONS OF OSIRIS
76 NINJA SPIRIT
77 PROJECT FIRESTART
78 THUNDERCATS
79 LEGEND OF KAGE
80 ACE OF ACES
81 DIEHARD 2
82 AFTERBURNER
83 GRYZOR
84 ZAXXON
85 WONDERBOY: MONSTER LAND
86 SUPER HANG-ON
87 RAMBO III

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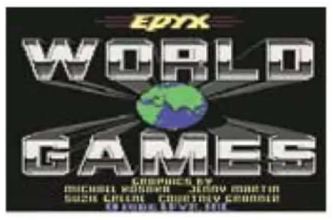
WORLD GAMES

AROUND THE WORLD IN 80 JOYSTICK WAGGLES



- **PUBLISHER:** EPYX
- **RELEASED:** 1986
- **GENRE:** SPORTS
- **FEATURED HARDWARE:** C64
- **EXPECT TO PAY:** A FEW QUID

HISTORY

***World Games* for the C64 marked a departure from previous entries in the *Games* series, moving from events you'd see in the summer and winter Olympics to more diverse and, arguably, interesting fare.**

The idea was that you travelled around the world, experiencing eight varied and sometimes decidedly quirky events, many of which had not been immortalised on 8-bit computers before. While a couple were fairly straightforward – weightlifting in Russia and slalom skiing in France – the remainder were extremely leftfield: barrel-jumping on a German lake, perilous cliff-diving in Mexico, log-rolling in Canada, bull-riding in the USA, caber-tossing in Scotland and sumo wrestling in Japan. A varied selection to be sure.

For gamers increasingly jaded by traditional sports titles, *World Games* provided something genuinely new, even if the control methods were tried-and-tested (methodical left/right movements to build speed in barrel-jumping mirrored skating events in *Winter Games*, for example). But what took *World Games* to the next level was its programmers clearly having a blast while making the game, peppering each event with cute graphical touches that you only noticed after extended play.

Some were apparent only if you did nothing – a weightlifter checking his grip, a slalom skier digging his poles into the snow – but many were essentially rewards for failure. Cliff-dive into the bottom of the shallow pool, rather than rapidly surfacing, and a watching bird covers its face with a wing, not daring to look at your diver's misfortune. Likewise, take too long to set down a particularly heavy set of weights and you're treated to a cartoon skit that wouldn't look out of place in a Warner Bros. cartoon.

It's the mark of true gaming genius when a game's as much fun when you fail as when you actually succeed at it. This is one of the reasons the *Games* series – at least if we ignore everything that came after the excellent *California Games* – was such a huge success and remains compelling and fun multiplayer gaming today.

FIRST TOSS 33'

THE MAKING OF...

THE GREAT GIANA SISTERS

Rainbow Arts modelled its classic 8 and 16-bit platformer on one of the most successful console games of all time, but then it got rumbled and its game was pulled from shelves quicker than you could say lawsuit. Darran Jones charts the creation of two platforming sisters. Just don't tell Nintendo...

» Here's the loading screens for all five released versions. While the MSX version (far right) is little more than text, it's still a lot better looking than that atrocious Amstrad art (far left).

IN THE KNOW

» **PUBLISHER:** RAINBOW ARTS

» **DEVELOPER:** TIME WARP

» **SYSTEMS:** C64, AMSTRAD CPC, AMIGA, ATARI ST, MSX, SPECTRUM (UNRELEAED)

» **RELEASED:** 1987

» **GENRE:** PLATFORM

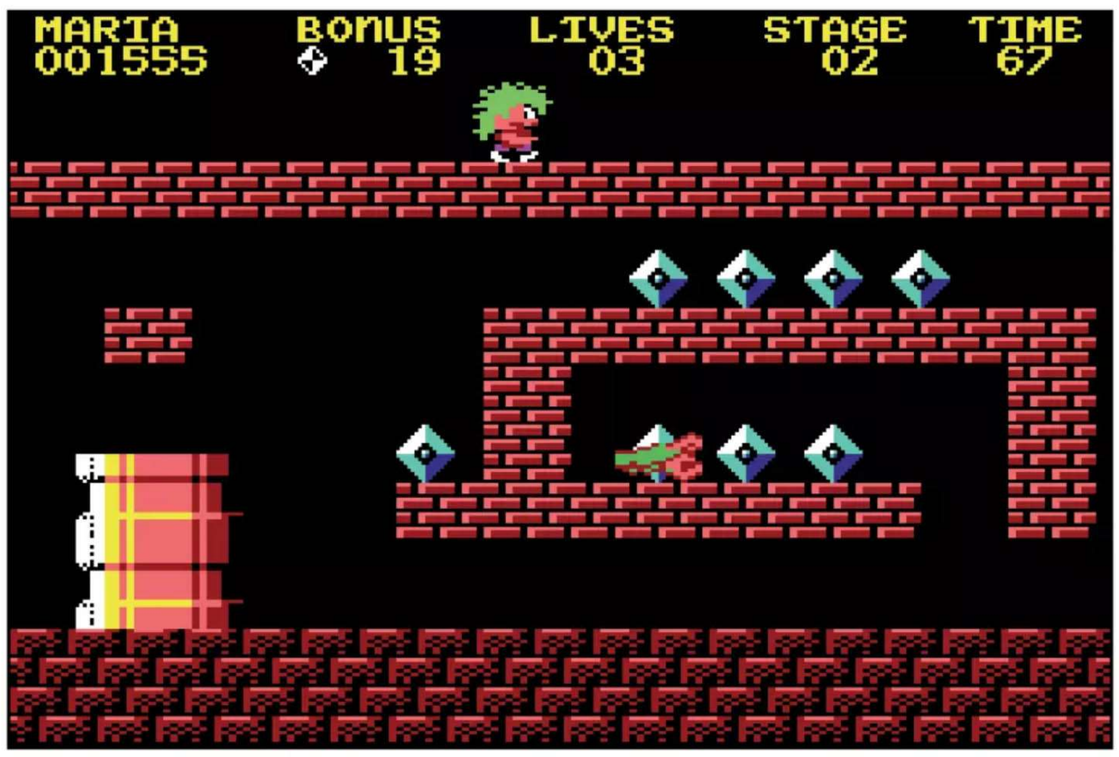
» **EXPECT TO PAY:** £10+

During the late-Seventies and early-Eighties, clones of popular arcade games were rampant and they quickly began to spread to home computers like a cancerous growth. *Krazy Kong* was a surprisingly good ZX81 clone of Nintendo's *Donkey Kong* and was also the name of an unofficial bootleg of the very same arcade game, *Snapper*, *Munchman*, *Hangly-Man* and *Munchkin* were direct rip-offs of Namco's *Pac-Man*, while *Super Invaders*, *Cosmic Monsters*, *Space Attack* and *Space King* were spin-offs of Taito's *Space Invaders*.

In the early days of videogaming, many of these clones were left to leech off the arcade originals, growing increasingly fat off the efforts of the original creators. They even proved to be easy calling cards for fledgling developers – Geoff Crammond and Jon Ritman, for example – who were eager to break into the industry. Occasionally, however, these games came under fire, with their creators having to face copyright violation lawsuits and having to pay the consequences. Sometimes just being threatened was enough, as Manfred Trenz discovered when *The Great Giana Sisters*, a game he'd been working on with Armin Gessert, faced the wrath of Nintendo due to it being a little too similar to one of the Japanese giant's most popular games.

Super Mario Bros was one of Nintendo's biggest titles and was helping the Japanese publisher to grab a lucrative slice of the Western gaming market. With its slick scrolling, myriad of secrets and superb level design it proved to be in a totally different league to many computer platformers of the time and gamers were going absolutely nuts for it.

Eager to grab a slice of the *Super Mario Bros* pie, the then CEO of Rainbow Arts, Marc Ulrich, saw Shigeru Miyamoto's creation and immediately hatched a plan. "When he saw *Super Mario Bros*, he became very excited about it," recalls Trenz. "Since there was no game like it available on home computers at the time, he saw a chance



» While it's possible to run along the top of the screen here, don't expect it to lead to a secret warp area.

» That circle on the floor is a power-up. Grab it to grow big and dangerous.

for a successful game to be made using very similar game mechanics."

A team was quickly assembled, consisting of Trenz, who'd create the game's distinctive visuals; Armin Gessert was hauled in for programming duties (he ended up coding everything with the exception of the high-score routine, which was handled by Trenz), while legendary C64 musician Chris Hülsbeck handled the excellent theme tune.

Interestingly, despite the sterling job Trenz did with capturing *Super Mario Bros*' distinctive look he admits to never being a big fan of the actual game.

"I saw the PlayChoice arcade version before I saw the actual NES game, but to be honest, I was never really interested enough to play it. I never even bothered with *Donkey Kong*, which was the first game to actually feature Mario. I was always more interested in games like *Defender*, to be honest."

Despite Trenz's general apathy for the game, Ulrich was determined that he should be on board the project and, with a team in place, Ulrich's next step was to secure an actual Nintendo NES and a copy of the popular platformer. Nowadays it's common practice for coders to have direct access to original arcade code when they're working on conversions, but back in the early days it was an entirely different matter. Programmers would usually be supplied with nothing more than an actual arcade machine and a lot of ten pences, and intensive playing became the only way of accessing a game's secrets. Unsurprisingly, when Trenz and Gessert finally received their console the approach they had to take was no different. There was no backwards engineering involved and certainly no help from Nintendo, just a hell of a lot of playing and note taking.

"The NES was installed with *Super Mario Bros* and we had to play it over and over and over again to understand how the game worked and was put together," continues Trenz. "Eventually, I ended up seeing everything the game had to offer. Even now, providing I have lots of time and very good nerves, it's possible for me to beat *Super Mario Bros* without cheating."

Charged with creating both the game's look and its level design, Trenz soon realised that he was in a very delicate position, as he had to create a title that was immediately recognisable as *Super Mario Bros*, but not enough so that it would cause potential trouble for Rainbow Arts. As a result, the creation of many aspects, such as the layout of stages and the main character, took Trenz and Gessert a fair amount of time to perfect, meaning their game wasn't fully completed until a good six to seven months of hard graft had been put in.

"I did have complete freedom of choice when it came to designing the levels but the 'management' had a constant eye on the graphical style. It had to be very similar to *Super Mario Bros*," continues Trenz. "Yes, the graphical style was copied, but I did go out of my way to ensure that all levels were originally designed. I also found creating the main character [Giana] to be quite a hard task. It took me a very long time to find out the best look for her. I had lots of different variations but there always seemed to be something missing. It just took a really long time. So long, in fact, that practically every two weeks the management would be asking:

"TRENZ HAD TO CREATE A TITLE THAT WAS RECOGNISABLE AS SUPER MARIO BROS, BUT NOT ENOUGH SO THAT IT WOULD CAUSE TROUBLE FOR RAINBOW ARTS"

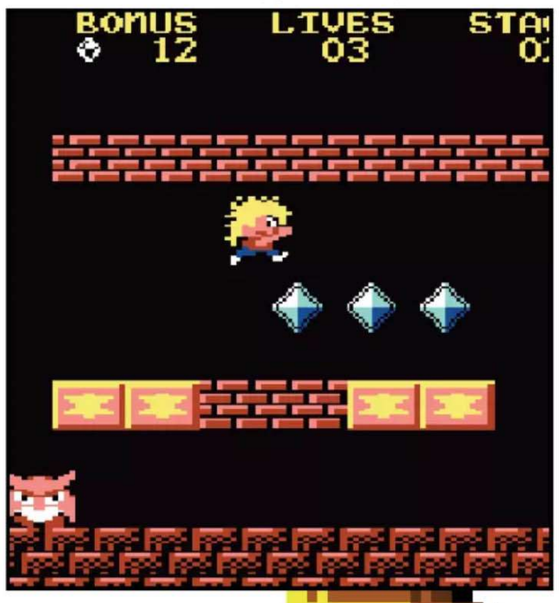
DEVELOPER HIGHLIGHTS

KATAKIS
SYSTEMS: C64, AMIGA
YEAR: 1988

R-TYPE
SYSTEMS: VARIOUS
YEAR: 1988

TURRICAN (PICTURED)
SYSTEMS: VARIOUS
YEAR: 1990

» Despite only being available for a short while, *Giana Sisters* became a firm favourite with C64 owners. Ironically, the Nintendo DS would evenutally get an official port in 2009.



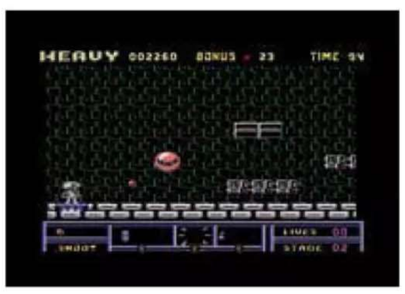
» Don't worry, you're not seeing two Gianas. The jumping one is in the foreground. Clever eh?

THE MAKING OF... THE GREAT GIANA SISTERS

OUT OF THIS WORLD

Rainbow Arts may have had its critically received game scuppered by Nintendo, but that didn't stop *The Great Giana Sisters* receiving a sequel. However, it was a rather low-key and many gamers didn't even realise that the two games were actually related. *Hard 'N Heavy* was released in 1989 for the Commodore 64, Atari ST and Amiga and was markedly different from Trenz and Gessert's original game. To avoid any more potential issues with Nintendo, *Hard 'N Heavy* featured a spaced-theme scenario that was a world away from the Day-Glo colours of *Great Giana Sisters*, and the two wild-haired girls now wore spacesuits which made them completely unrecognisable.

Many elements from the previous game still remained though. Blocks could still be busted, but doing so was now achieved with bullets instead of noggins, while collecting 100 gems still awarded you with an extra life. The floaty controls that made *Giana* stand apart from *Super Mario Bros* were also evident, although they felt far more suited to *Hard 'N Heavy*'s otherworldly environments. Contrary to popular belief, Trenz had no involvement in the game.



» One of these games is *Super Mario Bros*, the other is *The Great Giana Sisters*, can you tell which is which?

'What the hell are you doing? Show us something!'"

Hassle from upper management continued, and Trenz found even the most straightforward of tasks, like creating a flashy title screen, became increasingly difficult. "I ended up having to draw three different title pictures in the end," recalls Trenz as he looks back at the constant scrutiny that their game was under. "The first one was deemed to be far too cute, the second one was apparently far too gloomy and it was finally the third effort that ended up satisfying the management."

To try to distance Rainbow Arts' creation from Nintendo's, Trenz took out the familiar mushrooms and Koopas and other enemies in the game and replaced them with non-offensive-looking enemies, such as giant ants and other cute creations. Although some of them still looked remarkably similar to the original enemy sprites.

"I thought it would be incredibly cheeky to simply copy the enemies exactly as they were in *Super Mario Bros*, so I decided to invent as many new and funny ones as possible." Trenz's insistence on trying to make the game his own can also be seen whenever one of the sisters gobbles up the power-enhancing sweets that litter *Giana*'s many levels. Whenever Mario munches on a mushroom he grows in stature and his new power is easy to convey, with the sisters though, they simply grew new spikey haircuts. This wasn't down to machine limitations, however, but was another conscious decision on the part of Trenz. "It was simply a technical thing," he explains. "If I had gone and created another large sprite we would have been directly copying a feature exactly as it had appeared in *Super Mario Bros*."

Having to placate upper management's desire for an identical *Super Mario Bros* clone and wanting to create something that felt sufficiently different were the least of Trenz's problems, however, mainly because *Giana*'s distinct visuals had to be created from less than sufficient art tools. "Because there were no real tools available at the time, I simply had to make do with an existing tile creator that someone had created so I could build the graphic sets, and it proved to be a real pain to use. All the actual enemies ended up being simply placed in by hand."

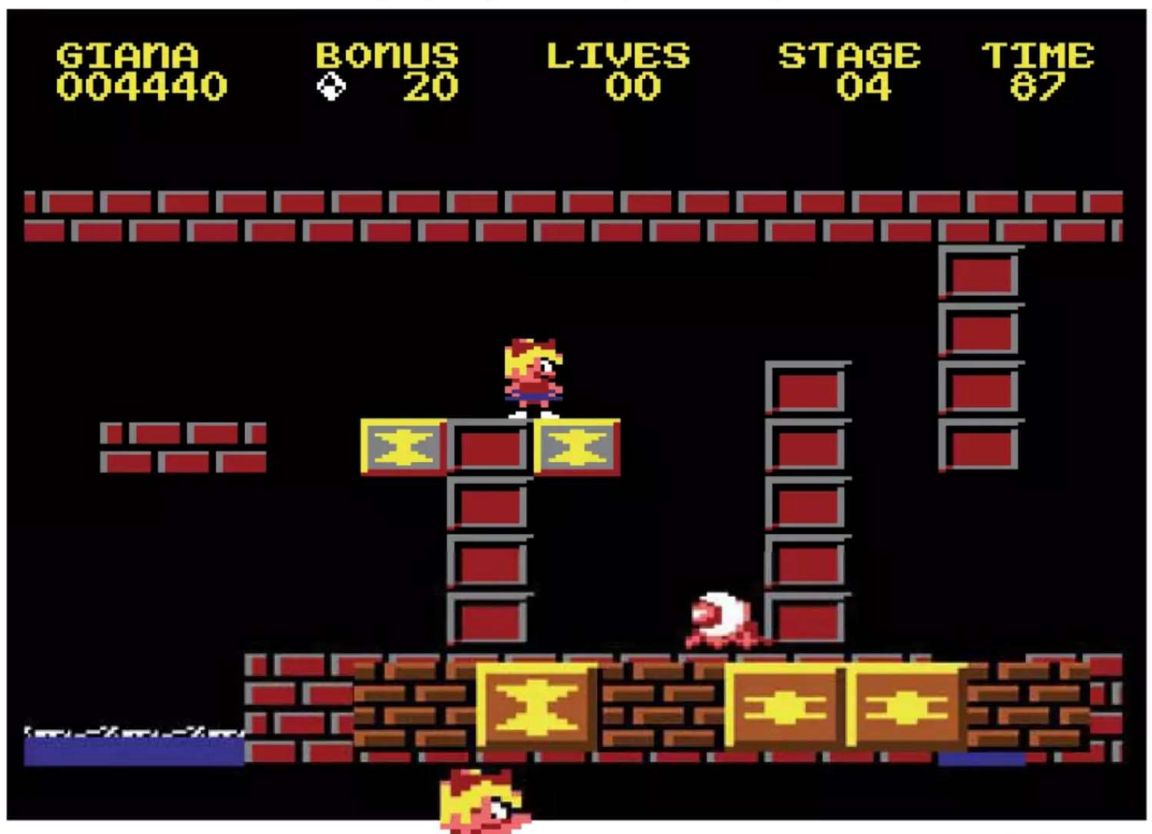
As work began to wind up, focus turned over to what the game would actually be called. "Well, we wanted the name to sound similar to *Super Mario Bros*, but nevertheless be a little different," confirms Trenz. "We decided on the following: 'Super' became 'Great', 'Mario' became 'Giana', while 'Brothers' would obviously turn into 'Sisters'."

When *Great Giana Sisters* was eventually released it was to a fair amount of critical acclaim, particularly on the Commodore 64, which many still argue is better than the Amiga and Atari ST versions (no one ever mentions the CPC offering as it's utter tripe). Indeed the C64 version managed to notch up a particularly impressive 96% from *Zzap64!* that went on to call it, "A fabulous, compelling and constantly rewarding arcade adventure."

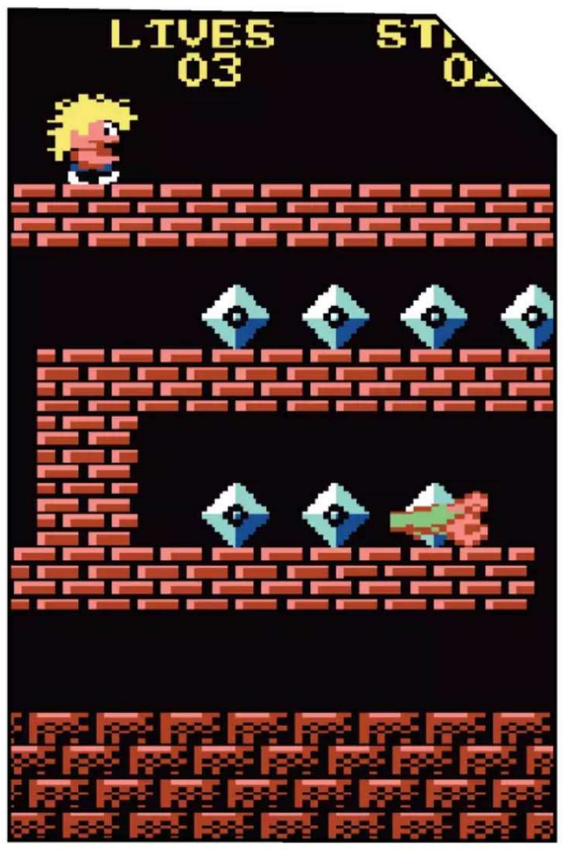
Rainbow Arts had achieved its goal and quickly pushed the game onto retail shelves. While Trenz was more than happy with the German box art, which mimicked his original loading screen, he wasn't at all impressed with the punk look that ended up on the UK release. "I really didn't like it. It just looks too strange to me and Giana looks like some kind of Miss Piggy."

Nintendo was also unhappy with *The Great Giana Sisters* and an injunction

» Chris Hülsbeck's music would often change depending on what level you were on. Every tune was excellent.



» Giana could smash blocks just like Mario, but unlike the plumber she didn't actually grow in size.



"TO TRY TO DISTANCE RAINBOW ARTS' CREATION FROM NINTENDO'S, TRENZ TOOK OUT THE FAMILIAR MUSHROOMS AND KOOPAS AND REPLACED THEM WITH NON-OFFENSIVE-LOOKING ENEMIES"

was taken out against Rainbow Arts' game. Rumours persist that the original injunction came about because a Nintendo representative had seen the game at a trade show and reported it, but Trenz isn't so sure. "I don't really recall who was actually responsible for the injunction, but placing the slogan 'The Brothers are history!' on the box certainly couldn't have helped."

Within a week of actually going on sale, *The Great Giana Sisters* was quickly pulled from UK shelves, and a similar pattern followed in the rest of Europe. Rather than fade into obscurity, Nintendo's injunction simply made the game even more desirable. "The reaction was really enthusiastic in Germany," remembers Trenz. "Even though everybody knew it was a 'copy' of *Super Mario Bros* it didn't seem to matter. It wasn't until right after the ban though that it became a 'cult'."

Perhaps what's most interesting about *The Great Giana Sisters* though, is that while it's obviously a blatant clone of *Super Mario Bros*, the actual titles do play very differently to each other. Yes, you now collect 100 diamonds instead of coins in order to gain an extra life and the ability to blow bubbles is virtually identical to Mario's fireball-throwing skills, but gameplay is very different due to everything taking place against a far shorter time limit. Then, of course, there are the controls of the main character to consider. Giana is actually far looser to control than her moustachioed counterpart and she also lacks the physics of her portlier peer, hanging for a lot longer in the air whenever she makes a jump.

"I wanted to make the levels in *Great Giana Sisters* far simpler and shorter than they were in *Super Mario Bros*," explains Trenz. "We actually decided to make the stages smaller on purpose because it allowed us to have a multiple of different levels within a very short development time. There was plenty of testing throughout *Giana*'s development period, so I feel the time limits we imposed are actually quite fair."

After all the controversy, Trenz is still fond of *Great Giana Sisters*, the rights of which are now held by Gessert's Spellbound Entertainment, even if it didn't match its parent's quality. "I think it's a great game, but it never reached the detail and class of *Super Mario Bros*."

Many avid C64 fans will no doubt disagree with the above words, but it matters not. They committed *Giana* to their hearts 25 years ago. Over two decades on and the love is still there.

» Certain enemies are impossible to destroy, so be sure to avoid them.

YOU'RE SO FIRED!

While regular readers will know that we're huge fans of Sir Alan Sugar's Amstrad CPC, even we're appalled by the god-awful conversion of *Giana* that appeared on our favourite computer. Whatever you do, don't under any circumstances play this sorry excuse for a game. It's an utterly abominable creation that boasts irksome controls, absolutely horrendous looking visuals and appears to have been coded by someone who was simply watching over the shoulder of whoever was playing the C64 original. Add in the fact that there's not a smidgen of sound and that the loading screen boasts the same gruesome art that appeared on UK posters and *The Great Giana Sisters*' fate is sealed.

Special thanks to Manfred Trenz and the wonderful Matt Allen

Neil Brennan
» **Age:** 45
» **Occupation:** Senior software engineer
» **URL:** majitek.com
» **Favourite composition:** *Samurai Warrior/ Usagi Yojimbo*
» **All-time favourite SID:** "Anything by Rob Hubbard"
» **Favourite record:** *The White Album* (The Beatles)

Ben Daglish
» **Age:** 43
» **Occupation:** Musician and programmer
» **URL:** ben-daglish.net
» **Favourite composition:** *Trap*
» **All-time favourite SID:** *Masters Of Magic*
» **Favourite record:** *Domino Theory* (Weather Report)

Jonathan Dunn
» **Age:** 41
» **Occupation:** Executive producer
» **Favourite composition:** *Total Recall* (title)
» **All-time favourite SID:** *Spellbound*
» **Favourite record:** *Backfired* (Masters at Work)

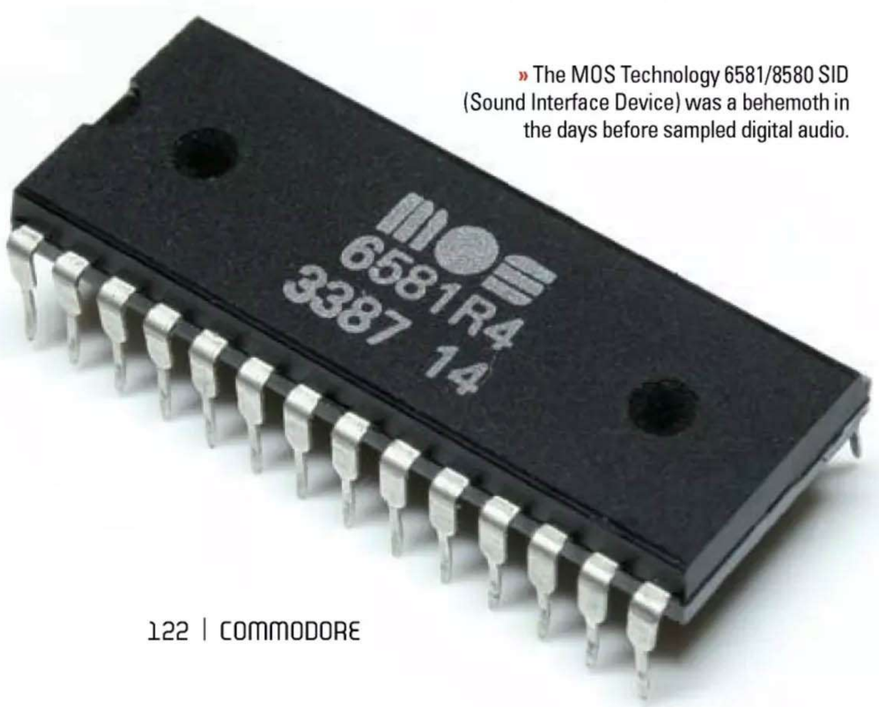
Martin Galway
» **Age:** 43
» **Occupation:** Freelance audio director
» **Favourite composition:** *Wizball* (title)
» **All-time favourite SID:** *One Man And His Droid*
» **Favourite record:** *The Flat Earth* (Thomas Dolby)

Fred Gray
» **Age:** 55
» **Occupation:** Care worker/admin worker
» **Favourite composition:** *Madballs* (title)
» **All-time favourite SID:** *Sanxion* (sub-tune 2)
» **Favourite record:** *Wish You Were Here* (Pink Floyd)

Jon Hare
» **Age:** 43
» **Occupation:** Games designer
» **Favourite composition:** *Oh No!*
» **All-time favourite SID:** *Parallax*
» **Favourite record:** *Everyone Is Everybody Else* (Barclay James Harvest)

The SID

The SID chip was revolutionary, and the musicians that made it sing laid the foundation for modern videogame music. Craig Grannell rounds up a dozen SID stars to find out their thoughts on the evolution of SID music



» The MOS Technology 6581/8580 SID (Sound Interface Device) was a behemoth in the days before sampled digital audio.

In the battle for 8-bit supremacy, the SID chip became the C64's main weapon. While other platforms offered more speed or better graphics than Commodore's reliable bread bin, the SID brought the earliest examples of high-quality videogame music to home gaming. As the years went by, relatively simple ditties gave way to hugely complex compositions, created by programmers and musicians that became 8-bit celebrities: Hubbard, Galway, Whittaker, Huelsbeck and many others. A great soundtrack could sell a game, and, increasingly, the SID sold the platform, with gamers drawn to its chip-tune charms. Rather than tell the story of SID ourselves, this feature brings together 12 top talents from the C64 days, who reveal their memories about how they laid the groundwork for videogame soundtracks for years to come.

Why was the SID chip great?

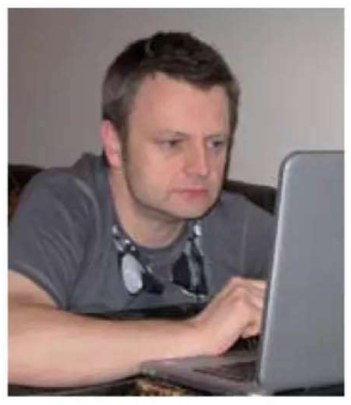
Rob Hubbard: It was one of the first sound chips, and music evolved as the games were being pioneered. A whole culture developed around the C64 and the people involved with it.

Martin Galway: It was the most advanced sound synthesiser of its time, had unique features not found elsewhere, and was designed with an approach completely different to its rivals, which gave it a unique sound quality.

Chris Huelsbeck: The designers upped the ante, going beyond the norm, which was a cheesy digital style put into early arcade machines and computers. Yannes wanted to create a real synth, and he went on to build synths for Ensoniq. I recall he'd originally planned to put eight SIDs into a case with a keyboard, but it came out too noisy, but Commodore jumped on it. The design had a real filter, three oscillators, and sounded so much better than anything that had come before.

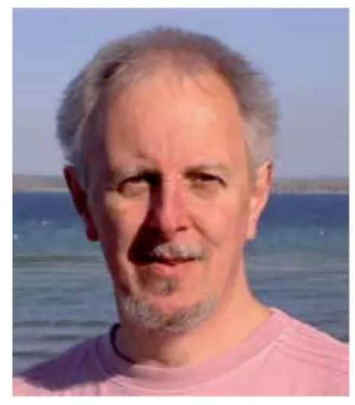
Rob Hubbard
» **Age:** 53
» **Occupation:** Musician
» **Favourite composition:** *Sanxion*
» **All-time favourite SID:** *Rambo*
» **Favourite record:** "Too many to list"

Chris Huelsbeck
» **Age:** 41
» **Occupation:** Videogame composer/ sound designer
» **URL:** huelsbeck.com
» **Favourite composition:** *Starball*
» **All-time favourite SID:** *Monty On The Run*
» **Favourite record:** *Please* (Pet Shop Boys)



Graham 'The Mighty Bogg' Marsh
» **Age:** 43
» **Occupation:** Electronics test engineer (team leader)
» **Favourite composition:** Bits of different tunes
» **All-time favourite SID:** *Aztec Challenge*
» **Favourite record:** *Dirty Boy* (Cardiacs)

Reyn Ouwehand
» **Age:** 36
» **Occupation:** Record producer
» **URL:** reyn.net
» **Favourite composition:** *Deadlock*
» **All-time favourite SID:** *Nightdawn* (sub-tune 2)
» **Favourite record:** *OK Computer* (Radiohead)



Martin Walker
» **Age:** "Stopped counting"
» **Occupation:** Composer, sound designer, technical writer
» **URL:** yewtreemagic.co.uk
» **Favourite composition:** *Armalyte* (title)
» **All-time favourite SID:** *Delta* (in-game)
» **Favourite record:** *Close To The Edge* (Yes)

Dave 'DialogueGuru' Whittaker
» **Age:** Old
» **Occupation:** Head of audio, Traveller's Tales
» **URL:** ttgames.com
» **Favourite composition:** *Glider Rider*
» **All-time favourite SID:** *Master Of Magic*
» **Favourite record:** *Equinoxe* (Jean Michel Jarre)

Crowd

Ben Daglish: It was the first sound chip you could do groovy things with. Before that, you got a square wave with a bit of an envelope, but with SID you've got all sorts of lovely sounds. It was my first proper electronic instrument and was groundbreaking.
Jon Hare: The C64 was the first games machine that could make anything that sounded even remotely like music. It had a unique sound of its own, which made it seem very futuristic at the time. It's the biggest leap in videogame sound I can remember.
Martin Walker: It could be frustrating working within the SID's limitations, but that's what taught you to make the most of what you had – good advice generally in life! For me, the most special aspect of the SID was its ring modulation and sync features, which allowed me to create metallic, 'speech-like' sound effects, such as the 'Meanwhile!' so many gamers commented on in *Hunter's Moon*.
Graham Marsh: I liked having three voices built in. Previously, I'd used the Spectrum and had to use an add-on box to do proper chords. The SID improved games no end – just play *Castle Of Terror* to feel the atmosphere good sound and music can create. *Aztec Challenge* used music progressively – the further you got, the more the music developed, which is a great device and a good incentive to keep playing!
Neil Brennan: It was certainly a relative joy to compose for the SID 'beepatron' after the horrible deficiencies of the Z80's 'clickatron'. White noise, filters, ring mod... all lovely. I would have killed for one more channel, though.
Fred Gray: At first, I was more intrigued with the C64's sprites, and so my original music driver didn't fully exploit the SID's capabilities. It wasn't until I heard amazing things others were doing that I decided to write a more comprehensive driver. I always thought gameplay was the most important part of a game, but the SID intensified this with music. A good example is in the *Mutants* maze – it's like having a clock ticking in your brain. I think all SID programmers aimed to play psychological games with their listeners, especially Martin Galway with his moody pitch bends and thumping beats.

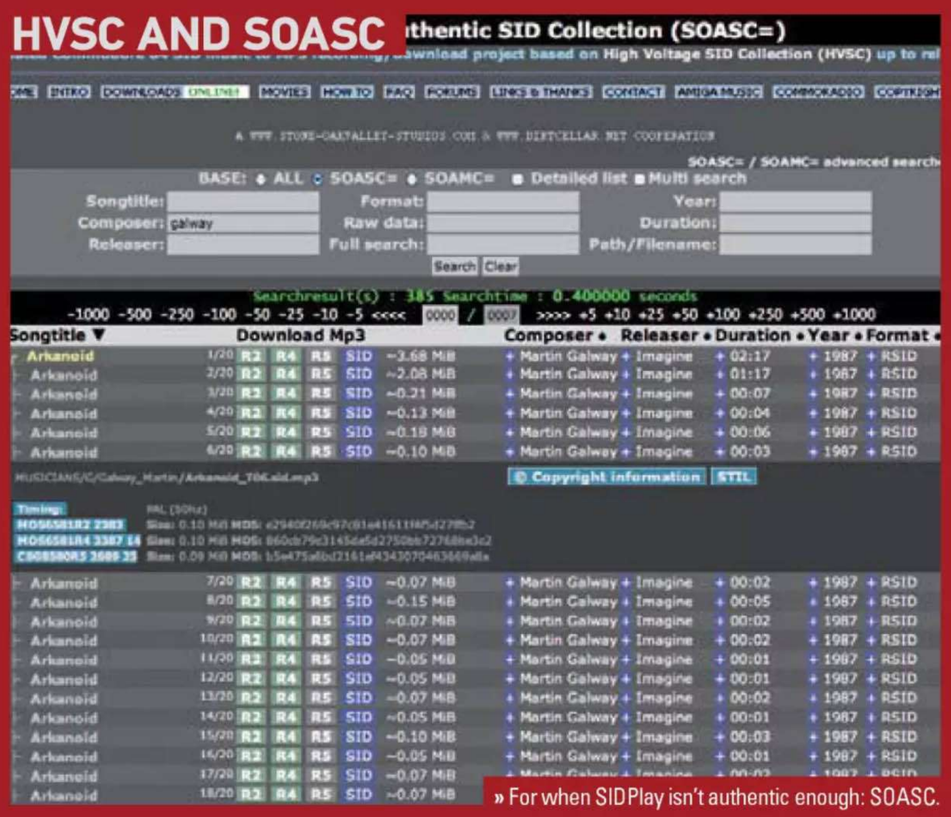
How did you get into making music for the Commodore 64?

MG: I was working on the BBC Micro, which was used in schools. I didn't think much of the C64 – it was, by comparison, bereft of support for easy programming. But Ocean's development manager David Collier shoved a C64 in my face and said, 'Program for this instead!' I guess I was obliged at that point!
RH: I had a strong background in analogue synths and started playing music when I was a kid. I started

"We laid the groundwork for videogame sound. That it's still honoured is a testament to what we did" *Chris Huelsbeck*

The SIDCrowd PLAYBACK

HVSC AND SOASC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Songtitle ▼ Download Mp3 Composer Releaser Duration Year Format
Arkanoid 1/20 R2 R4 R5 SID ~3.68 MiB + Martin Galway + Imagine + 02:17 + 1987 + RSID
Arkanoid 2/20 R2 R4 R5 SID ~2.08 MiB + Martin Galway + Imagine + 01:17 + 1987 + RSID
Arkanoid 3/20 R2 R4 R5 SID ~0.21 MiB + Martin Galway + Imagine + 00:07 + 1987 + RSID
Arkanoid 4/20 R2 R4 R5 SID ~0.13 MiB + Martin Galway + Imagine + 00:04 + 1987 + RSID
Arkanoid 5/20 R2 R4 R5 SID ~0.18 MiB + Martin Galway + Imagine + 00:06 + 1987 + RSID
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© Copyright information STIL
Timing: PAL (50Hz)
HOSC6581R2 2383 Size: 0.10 MiB MD5: e2940f269c97c01e4161114f5d27ffb2
HOSC6581R4 3387 14 Size: 0.10 MiB MD5: 860db79e31456de5d2750bb72768be3c2
C00E500R5 2688 25 Size: 0.09 MiB MD5: b5e475a6bd2161ef4343070463669e8a
Arkanoid 7/20 R2 R4 R5 SID ~0.07 MiB + Martin Galway + Imagine + 00:02 + 1987 + RSID
Arkanoid 8/20 R2 R4 R5 SID ~0.15 MiB + Martin Galway + Imagine + 00:05 + 1987 + RSID
Arkanoid 9/20 R2 R4 R5 SID ~0.07 MiB + Martin Galway + Imagine + 00:02 + 1987 + RSID
Arkanoid 10/20 R2 R4 R5 SID ~0.07 MiB + Martin Galway + Imagine + 00:02 + 1987 + RSID
Arkanoid 11/20 R2 R4 R5 SID ~0.05 MiB + Martin Galway + Imagine + 00:01 + 1987 + RSID
Arkanoid 12/20 R2 R4 R5 SID ~0.05 MiB + Martin Galway + Imagine + 00:01 + 1987 + RSID
Arkanoid 13/20 R2 R4 R5 SID ~0.07 MiB + Martin Galway + Imagine + 00:02 + 1987 + RSID
Arkanoid 14/20 R2 R4 R5 SID ~0.05 MiB + Martin Galway + Imagine + 00:01 + 1987 + RSID
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Arkanoid 16/20 R2 R4 R5 SID ~0.05 MiB + Martin Galway + Imagine + 00:01 + 1987 + RSID
Arkanoid 17/20 R2 R4 R5 SID ~0.07 MiB + Martin Galway + Imagine + 00:02 + 1987 + RSID
Arkanoid 18/20 R2 R4 R5 SID ~0.07 MiB + Martin Galway + Imagine + 00:02 + 1987 + RSID

» For when SIDPlay isn't authentic enough: SOASC.

For SID playback, SIDPlay is suitable for most, but emulation isn't entirely accurate. Binary Zone (**binaryzone.org**) offers CDs of SID recordings, but Stein Eikesdal's Stone Oakvalley's Authentic SID Collection (**www.6581-8580.com**) aims to offer the High Voltage SID Collection (**hvsc.c64.org**) in MP3 format. "The project records SIDs on real C64s, with no attempts to improve the sound, bar subtle noise reduction," says Stein. "The result is a 150,000-plus MP3 archive of music."

Stein says his aim was to provide the "sound as it would have appeared if you connected a C64 to a modern audio system", and although he'd been happy with SIDPlay, he changed his mind in 2006: "I found a site that showed the severe differences between emulation and real hardware, and this made me search for more authentic recordings." On discovering that no one had converted the HVSC, he did it himself.

EPIC SOUNDTRACKS

» [C64] *Miami Vice*: epic soundtrack; awful game.

Many SIDs were short loops and ditties due to memory limitations, but by utilising cunning looping techniques or applying lengthy soundtracks to relatively simple C64 games, SID musicians occasionally unleashed an epic. Hubbard's fantastic Pink Floyd-inspired 12-minute in-game *Delta* soundtrack remains a stunning piece, regardless of its chip-tune nature, and it isn't alone. Galway's ambient *Miami Vice* and intense *Parallax*, Matt Gray's filmic *Driller*, and Wally Beben's 26-minute piece for *Tetris* stand out from the crowd. And then there's the *Last Ninja* series – while its tunes are only a few minutes long, they helped in making the games seem like more than they were.

SAMPLE CITY

» [C64] *Turbo Outrun* offers a successful mix of samples and SID.

At the time, samples proved divisive, with some SID composers considering them a technical feat, but not one with any real musical merit. Today, the low fidelity of C64 samples sticks out like a sore thumb, but top composers nonetheless managed to use the technique to add to their SIDs in a meaningful manner. Witness Hubbard's rocking guitars in *Arcade Classics* and *Skate Or Die*, the crunchy percussion in Galway's *Arkanoid*, the loops behind the SID in Huelsbeck's *To Be On Top*, and Jeroen Tel's funky, sample-infused *Magical Sound Shower* update for *Turbo Outrun*. All great examples of SIDs where samples add character rather than detract from the synth sounds.

LIFTED BY MUSIC

» [C64] *Comic Bakery*: great if you ignore everything bar the music.

As Ben Daglish notes, C64 music was appreciated, and sometimes a composer's output could be so good that people would buy games primarily for their soundtracks. Hubbard classics graced iffy arcade conversion *Commando*, the mediocre *Knucklebusters*, budget failure *Rasputin* and rubbish shoot-'em-up *WAR*, lifting these turkeys from the mire. And even with divisive games like *Delta*, gamers tend to agree that Hubbard's music is sublime. Similarly, Galway's sterling efforts for Ocean ensured that *Miami Vice*, *Comic Bakery* and *Highlander* weren't complete disasters. Luckily, anyone today with a hankering to play these tunes can circumvent the games and just load the music in SIDPlay.

COVER VERSIONS

» [C64] *Exploding Fist*'s main theme is based on *Dance Of The Yao People*.

C64 game tunes often 'appropriated' tunes by chart-topping acts and synth legends like Jarre. Some covers, however, are more obscure. Daglish's popular *Cobra* theme, for example, is taken from the movie, and the main theme from Neil Brennan's *Exploding Fist* is lifted from *Dance Of The Yao People* from Phases of the Moon. Many famous Hubbard tracks are also borderline covers: *Delta* is Philip Glass's *Koyaanisqatsi* sped up, *International Karate* borrows from Ryuichi Sakamoto's *Merry Christmas, Mr Lawrence*, and *Zoids* and *Master Of Magic* are based on Synergy tracks. However, due to the nature of the SID and C64 composers, even these tracks take on a life of their own.

doing games and eventually specialised in audio, since most of it was so bad.

BD: I was at school with Tony Crowther, and he asked me for the music to the death march for a game. I wrote out the notes and he then asked for some Jarre. I started thinking I could write stuff myself – and I did.

Dave Whittaker: I started with making VIC-20 games and progressed to other major formats, eventually specialising in just audio.

FG: As I was discovering the C64, I was also trying to sell VIC-20 games to Tim Best. He liked the mood of my crude games, which he said was down to the music. One day, he told me to forget the VIC-20 and that we were off to Imagine – he wanted me on board to compose music for C64 games. I became an in-house music programmer, and it was a dream come true. All the musical experience I had at that time was with cheesy cabaret bands, but I loved music and programming. It was easier than playing live and I got to show off my creativity.

MW: I'd done some programming at university and had six C64 games published. But I'd been a musician for years before getting the programming bug, and so I created music and effects for my games. It seemed a natural progression to offer those services to others.

Jonathan Dunn: I was at college studying music and programming, and I combined the two things, sending demos to publishers. Before I knew it, I was getting commissioned and got an in-house job at Ocean. Initially, I intended to go to university a year later, but I never went.

Reyn Ouwehand: I'm not a programmer, and so it was SoundTracker that got me hooked, years after Hubbard was done making his classics. I was involved with demo groups – Blackmail, Scoop Designs – and through them I got hooked up with System 3 and Boys Without Brains, which led to commercial work.

CH: I always loved synth music and wanted my own synth, but my family couldn't afford one. I was also interested in videogames, read about the C64, and was taken in by the description of the sound chip. It took a year to get the machine, and my gran gave me the last 50 bucks! Soon after I started programming, a friend needed sound for his new game, *Planet Of War*, and so I worked on that.

What would you say your main influences were when creating music for Commodore's machine?

RH: I had many musical influences from all kinds of things, but there was a lot of electronic synth pop music in the Eighties that everyone copied.

NB: I was heavily interested by David Sylvian's band Japan at the time – and yes, it really shows!

MG: I spent my formative musical years listening to loads of electronic music, such as Jarre, Tangerine Dream and Thomas Dolby. This affected my compositions, although as I'd I grown up listening to rock and roll and enjoyed fiddly guitar solos, it was natural for me to try to emulate those too.

BD: My parents ran a folk club, and as a baby I was famously bounced on the knee of various folk luminaries. I played in orchestras and listened to lots of heavy metal in my teens, and then electronic stuff. It all sort of merged together. You do make distinctions between genres and styles, but it's all notes, really. And that's part of being a professional musician: you do what the job calls for. But I suppose 'orchestrally folky' was my natural state.

"I had many musical influences from all kinds of things, but there was a lot of electronic synth pop music in the Eighties that everyone copied" *Rob Hubbard*

MW: My main influence was the SID chip itself, since this determined what I could write.
RO: I was raised in a very 'amusical' household, and my influence was mostly what other SID musicians did. I also think the SID's sound was very significant. It really has its own style – and the phrasing of melodies is so SID.
GM: My first *Bogg Album* was cover versions of chart songs, but *Bogg Album 2* was all original stuff. I was listening to Depeche Mode, John Foxx, Gary Numan and Human League, so was influenced by them. I suppose my music had a certain style. I liked to mess around with odd chord changes, or weird out completely with ring mods. Music has to be stimulating for me to listen to it and I'm always trying to work out what's going on. Once I work it out, I'm bored with it.
FG: I can't say I had many influences, although I did like to borrow from the classics – I owe Bizet big time for *Foxx Fights Back*! But most of my music was purely me: I'd get a tune in my head and work on it, sometimes for days, trying to get it how I heard it in my head. Sometimes I'd strip them down into small, repetitive tunes for high-score tables. But I must admit Mike Oldfield inspired the *Mutants* main tune!

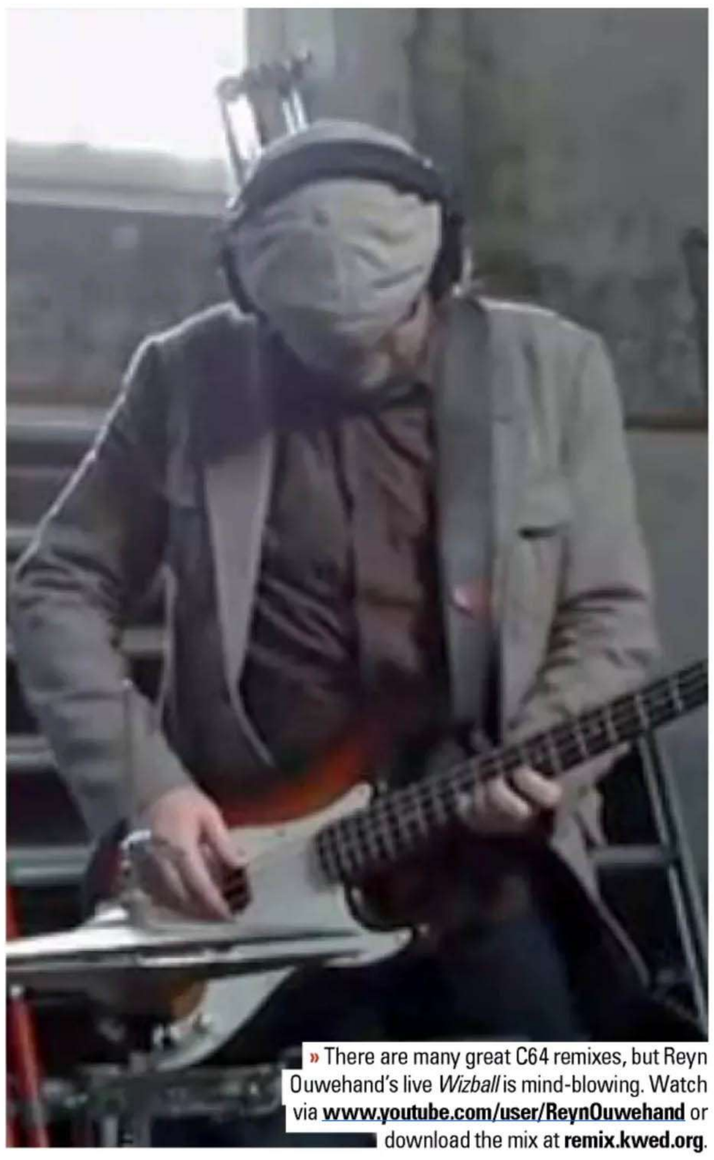
Did you consider the SID a synth, or were you trying to ape real-world instruments in your compositions?

FG: I often imagined orchestral pieces or rock arrangements, but rarely tried to emulate individual instruments – the SID chip had a sound all of its own.
NB: The SID is pretty limited. I loved synths when they sounded like new instruments you hadn't heard of yet, but I was never satisfied by what we got on the C64. It didn't help that every C64 seemed to have its own unique filter values. There can't have been much quality control in the SID chip factory!
DW: I just treated it as a restricted synth – you couldn't really emulate any 'real' instruments.
MW: Drums were feasible by changing between noise and other waveforms 'on the fly', but in general the sounds were out and out synth-like in nature, so I went with the flow. Given that most games were futuristic shoot-'em-ups, synth music was the perfect choice anyway.
BD: I went for trying to get 'realish' instrument sounds, but there were definitely two camps: people like me, and those into pure SID. Often, those sounds became the basis of a piece, but I'm into notes. I don't care what they're played on. Generally, I'd come up with the tune and notes, then play with settings until everything sounded halfway decent. The one exception was *Deflektor*: I came up with a really nice cowbell sound and decided I had to write a piece around it. 'TOK TOK TOK-N-TOK!' You gotta do something with that, right?
JH: What was great about the SID was it being a crossover instrument between techie bleeps and regular electro-synth music. It's interesting in the SID'80s band I play in that Mark Knight's electric violin sounds close in tone to some of the synth lead voices used by C64 composers.

» Ben Daglish's classic music for *The Last Ninja*'s first level set the scene for an astonishing 8-bit filmic soundtrack by four composers across three games.

What process did you use when composing?

RH: I played most of the games and then used an assembler program and typed everything in using database statements. I used my own code – I was one of the first to use sampled instruments, and to try and get tunes that sounded like they had more than three voices.
DW: I used my Yamaha CX5 and Roland Jupiter 6, and then machine code and assemblers – but no MIDI – on the C64. I coded everything, although I did share and swap players with Rob Hubbard for a couple of different formats.
MG: I had an all assembly language, no fancy editors, hard-work approach to putting in tune data. This allowed me to custom-modify program code for each tune, but slowed development considerably. Complex tunes could take a month to complete.
JH: For a lot of the *Wizball* music, Martin got Chris to play lead guitar and me to play bass, and then transposed our music on to the C64.
MG: I also used a Seiko synthesiser that was lying around the office, but it wasn't closely connected, technologically – it was just a keyboard I could rehearse on. My code was my own, and I believe I invented the fast arpeggiation technique for mimicking chords, first released in *Kong Strikes Back* in 1984.
GM: I started off using DATA statements, playing notes on my synth, and converting them into numbers from the *C64 Programmer's Reference Guide*! Hundreds of lines of numbers, all hand-coded in BASIC! Later, I got a version of Hall & Oates' *Maniac* that played on interrupts. I was so amazed at music playing in the background while I typed BASIC routines that I found out which program created it and got a copy. That was Master Composer, which I used for everything after that.
MW: I just started entering data and creating the music in situ, so I could hear right away how the final result was going to sound. I've always been disappointed when composing on one platform and rearranging the music on another with its own set of limitations. With only one C64, I couldn't play games while working on the music, but I'd sometimes record it to cassette and play that alongside to make sure it fitted well. Also, with the tiny amount of RAM I was allocated, every byte counted, so I often used polyrhythms – two loops of slightly different lengths that played against each other, resulting in long sections of evolving music



» There are many great C64 remixes, but Reyn Ouwehand's live *Wizball* is mind-blowing. Watch via **www.youtube.com/user/ReynOuwehand** or download the mix at **remix.kwed.org**.

before they repeated, but using very few bytes.

NB: I'd meet with Fred Milgrom, who'd brief me regarding what he was after. I'd then hide in my bedroom with a four-track cassette recorder and lots of keyboards and guitars. A couple of days later, I'd play him my ideas and we'd choose which to port to the C64. I'd transpose my four polyphonic tracks into three mono ones in the music language I'd written and implemented for the C64.

FG: I'd find the backbone of a tune on the keyboard, but most arranging was done on the C64, tweaking note and effects data. I used my own drivers and got interesting original effects by using pitch envelopes, as in *Nodes Of Yesod*. When I rewrote my driver, I made great use of ring modulation, as shown in *Mutants*.

RO: I'd studied piano, so I mostly composed on the piano and then put the notes in the computer. But I'm a bad programmer, so I had to wait for others to create players and routines for me, which was a hassle. I think it was easier for Hubbard and Galway to make C64 music, because they were very good programmers. Sometimes, I got to play the games. I custom made music for *Last Ninja 3*, and when Cyberdyne made a game, we stayed in this house and worked together, trying to make the music in sync. But mostly you'd get a fax detailing what was needed: the number of levels, and maybe what kind of atmosphere there should be.

CH: When I got the C64, I played games for a year and programmed a little BASIC. But I really wanted to become a games designer, and so I started assembly programming and made myself a player. When making tunes, I'd usually play around with a bass line, play with cool sounds, make a beat or something, and develop a melody over it. I think my music is more melody-driven than the background – the background's kind of interchangeable. Regarding the sound itself, an important thing with SID is pulse-width modulation, which makes one voice sound very fat, like when you detune a few normal synth voices and play them together. Almost everyone used that to enhance their sounds, and I had that figured out very early. When Galway did his arpeggios, I was already thinking about altering the frequency very fast to get a chord impression. When I heard his Ocean Loader, I coded that stuff in and it made a huge difference.

BD: I did it all in my head. I used to sit down with the text editor and type notes out. If things got very complicated, I'd maybe grab an instrument and see what something sounded like, but generally it was from the head to the page. Tony Crowther wrote a nice driver for me to type in things like 'C2, 10, D2, 13', and we adapted it to add structural stuff – loops, phrases – and define different sounds. I worked with that and other drivers at Gremlin, before I wrote my own, which then made it easier to port code to different platforms.

"I imagined orchestral pieces or rock arrangements, but rarely tried to emulate instruments – the SID chip had a sound all of its own" *Fred Gray*

» Top SID composers matched great music with quality sound effects, such as the metallic noises and blasting sounds in Martin Walker's *Hunter's Moon*.

What are your thoughts regarding samples within SID tunes?

RH: Sampling used too much CPU to be practical, but it was a new effect. It was limited, but it did add something to get away from the 'generic' SID sound.

CH: Samples were a discovery I had in my early days at Rainbow Arts. I was researching new ways of enhancing SID sounds and discovered Digidrums. The main program was BASIC and there were assembly routines for the playback of the drums. I found how the drums were triggered and played with the program and realised you could activate SID voices behind the drums. That gave me the idea to combine a SID tune with sampled drums. With a friend, I hacked together a sampler on the C64 user port, sampled my own digi drums, had my own playback routine and combined that with my player. We had this cool stuff laying around for a few months, waiting for a game to put it in, and I imagined the reviewers would go bananas when they heard it. And then Galway's *Arkanoid* came out just before we released our stuff! His technique was based on the same principle as

ours, only his drums were a bit more synthesised.

RO: I was never into the digi thing, because I thought it sounded crap. If you want to do the real thing, do it real. If you want real drums, guitars and basses, record real instruments. For me, the fun thing about SID was that it sounded like a SID – it had its own distinct sound. On the Amiga, you could use samples, but they didn't sound like the real thing, so that's when I quit computer music, got a proper sampler and focused on real music production.

BD: Another problem with samples was the space they took up, not leaving much room for a game. It was technically impressive what people managed to do, but not necessarily musically impressive. It was more about sounds than notes, which was never my bag.

MG: When sample playback was discovered, the musicality went away to a degree, because sample fidelity was low, but it was an unstoppable technological development and couldn't be resisted.

What were the biggest constraints when working on SID music?

BD: Three voices! What could you do in three voices? I wanted an orchestra! [laughs] There was the fun aspect, the challenge – you'd use wobbly chords with fast arpeggios, and work around the limitations, but it was hard writing good harmonies. You'd drop one voice if you wanted sound effects. Deciding which was going to be the least important voice... They're all important! You don't need explosions – listen to the music!

GM: I quite like limitation. With current PC recording studios and unlimited sounds, I never get started. You had three voices and you just got on with it.

RO: Limitations give the best results. Nowadays, everything's possible and everything sounds the same. The SID's limitations gave it its own sound and also originality.

MW: The lack of memory was a problem: you were lucky to get a couple of kilobytes for your player code and music data. With few simultaneous channels, I ended up combining several instruments into single musical lines to add depth, like a sampled drum loop today. I'd follow a kick drum with a bass note, then a snare drum hit, another bass note, and so on, while another channel played the melody and a third was dedicated to multiplexed chords. But occasionally memory constraints could be so severe that I had to strip [various] features from my player, such as vibrato, in order to claw back the bytes to squeeze in another tune!

MG: No stereo panning... The filter could only be clearly applied to one voice... I found the ADSR programming tricky too. I adapted compositions to meet the needs of the chip, which meant they don't translate perfectly on other setups without the same limitations. I sometimes imagined a larger tune was in there, but only three notes at any one time could get out.

JD: For me, the biggest constraint at Ocean was the time you had to do something. We were churning out games, and I'd work on platform conversions of tunes. But one of the fun aspects of making music for 8-bit games was pushing the hardware. If we wanted to do something different, we had to work out how to do it.

How did you handle arcade conversions?

RH: I always tried to write music to maximise the target hardware. And so if I had to convert some other music I tried to adapt it to suit the C64.

DW: I hated doing arcade conversions. You never got the musical scores – you just had to listen to every single note, again and again. Painful!

JD: Amazingly, we did occasionally get scores for some conversions, although we'd mostly transcribe from tape.

MW: It was a nightmare! Sometimes I got an inch-thick pile of music manuscript paper with scores from Japanese companies, but mostly you were lucky to get a poorly recorded cassette of each tune, made by placing the in-built microphone nearby while someone played the arcade game. Inevitably, they forgot they were recording the music, so you had to fathom out the notes while people chatted, groaned and chortled over the top!

FG: I thought converting arcade tunes was fun – they were a challenge. I once remember hearing a Joplin tune and discovered it was in F-major. I went to the library and found a Joplin anthology, and the first tune in F-major was the music I was after. I quickly converted the dots to numbers and had my music – easiest money I ever made! And there was always some of your own style in the conversions, which was all part of their charm.

When it comes to C64 music, what was your proudest moment?

RH: The full orchestral arrangement that I did of *International Karate* was a lifetime ambition. It's a pity it wasn't recorded.

DW: Hearing my music in a game, for the first time, at computer shows.

» *Delta*'s mix-e-load mini mixing desk for Rob Hubbard tunelets. So good, you'd stop loading the game just to mess about with it.

NUMBER CRUNCHING

Bob Yannes designed and completed his work on the initial version of the SID chip in 1981

Advanced for its time, the SID chip provides 3 independent oscillators with 4 available waveforms each, 1 multi-mode filter, 3 ADSR volume controls and 3 ring modulators

The SID went through 8 known revisions during its life, some of which dramatically changed its output. For example, samples are significantly quieter on the 8580 revision

Zzap!64 magazine gave Rob Hubbard's audio for Monty On The Run a score of 99%, calling it "Aurally am-m-m-mazing, technically perfect"

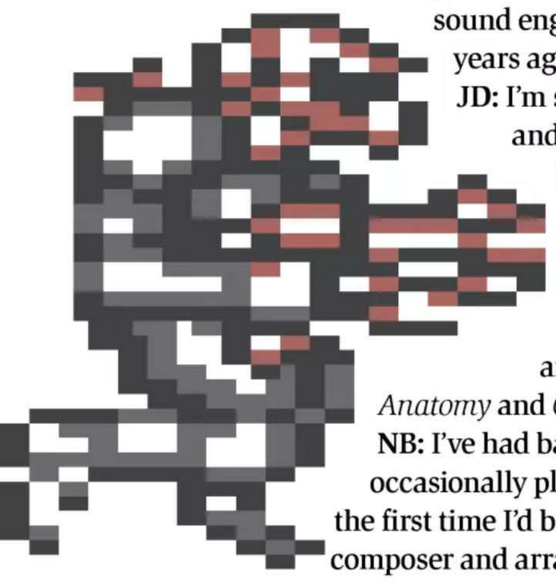
The SID chip had the US patent 4,677,890, although this expired in 2004

At the time of writing, the High Voltage SID Collection contains nearly 37,000 SIDs

MW: The first time I heard my music incorporated into someone else's game, along with all the sound effects, and realising how much it enhanced the whole gaming experience.
NB: That moment when you first play a just-completed game, stand back, and feel you've contributed to the full experience. I was proud of songs I created for games that good friends had written, and that I'd contributed to something they were proud of too.
FG: The fact that fans still love what I created back then – the wonderful mixes, rearrangements and live performances 25 years on. It could have easily been forgotten – you guys are the best, listeners and musicians alike!
RO: For me, the whole journey was great – especially, as a teenager, being invited to London for a business trip to make music for cool games!
BD: The number of emails I get from people who say they became a musician because of me. It's amazing to feel you've influenced so many people and turned them on to music. It was a great period, before game music became background 'film' music you don't notice is there. In the Eighties, game music was important – it was something games were scored on. People really appreciated it.

Are you still involved in music and did composing SID music help?

CH: My basic compositional approach is similar. I've learned more and do more sophisticated compositions, but you still hear my music and think: 'That's a Huelsbeck composition!'
BD: Writing hundreds of tunes was good composition practice – the C64 taught me about writing music and developing tunes, and the workmanship/craftsmanship aspect. SID music was also good training in utilising minimal resources, helpful for when I started writing for video and theatre. I'm now good at taking a bunch of actors who have never played anything before and getting them to create their own music.
JH: I'm working a lot with music right now. Along with SID'80s, Ben Daglish and I have launched **sensiblesoundware.com**, featuring 30 albums of material from games people and collaborators.
MW: Many people haven't realised the Martin Walker who writes for *Sound On Sound* and *Audio Technology* magazines is the same one who created those C64 games and music! I'm also working on my fifth album of ambient music for Yew Tree Magic, and recently took up sound design again. With that, I've ironically turned full circle, again trying to squeeze the last drop of creativity out of a particular sound engine, just as I used to years ago with the SID.
JD: I'm still involved in music and the games industry. I've been releasing house music for ten years, and my work has appeared on labels like Hed Kandi and TV shows *Grey's Anatomy* and *CSI: New York*.
NB: I've had bands for years and still occasionally play. The SID years were the first time I'd been paid for being a composer and arranger, and made me a



CONTEMPORARY SID

Chris Abbott of C64audio.com provides insight into the SID's role in contemporary music, from the C64 remix scene through to SID samples in commercial chart-toppers

■ What's your background regarding C64 audio?
I started as a wannabe composer, took the initiative with the CD everyone was waiting for, and accidentally moved into publishing and C64 live events.

■ What are your thoughts on the longevity of SID tunes?
There's a niche of creative individuals deeply affected by C64 music. It combined with our lives to become a unique soundtrack. It's good this link to the past isn't lost and that artists use the C64 scene for artistic growth.

■ Why did you create the original *Back In Time* CD?
Everyone had wanted a CD like that for ages. There were technical and budgetary limitations, but getting Rob Hubbard to cover his own stuff was mind-blowing at the time. It remains the bestselling album I've done, and for many people I think it kind of sated them forever.

■ What are your thoughts on the remixes available today?
It's a glut. The days when someone could release something stunningly game-changing are over. People buy less C64 music than they used to, because you can gorge yourself online. But it's good it's there, and the scene's main players work together, so it's a stable environment.

■ There's a dark side to C64 remixing – recording artists using SID samples without permission, such as Zombie Nation. What's your thinking on this?
Actually, Zombie Nation was later granted permission to use *Lazy Jones* in *Kernkraft 400*, but he went way beyond that permission. In the way he acted, it's like renting out your house and finding the tenant later claims to own it, changes the locks, and threatens you with legal action if you try to get another tenant. Then, when threatened, he offers to hire you a room back.

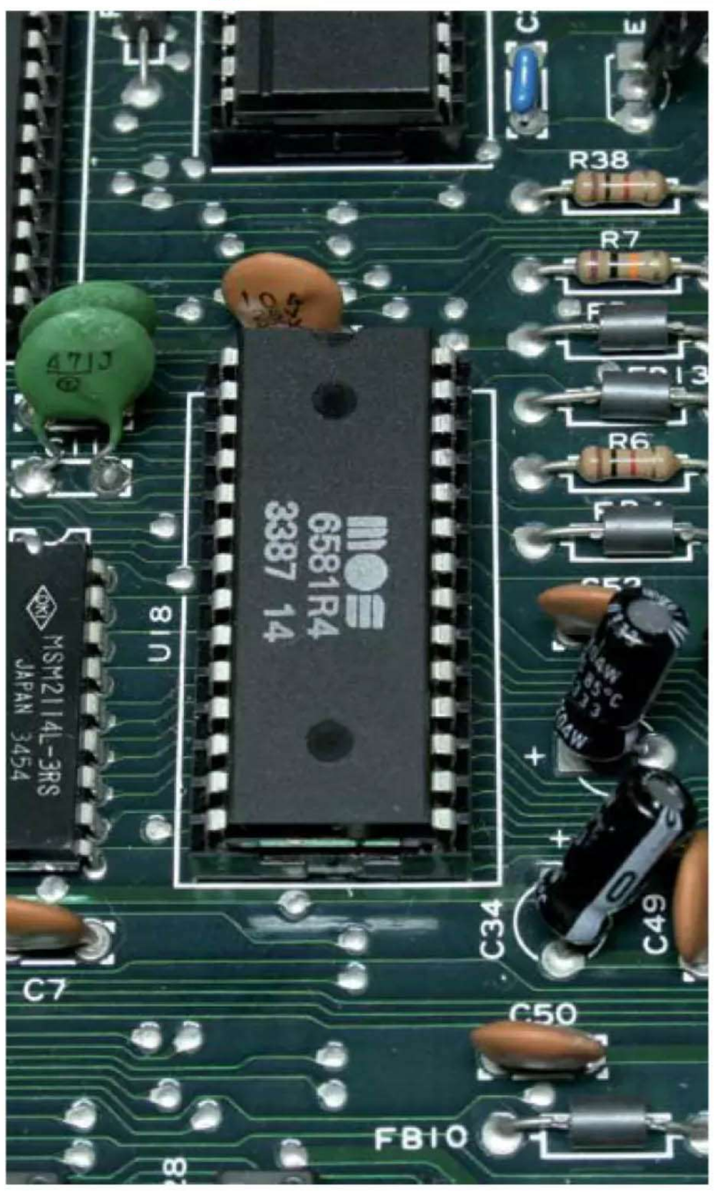
■ What about Timbaland sampling a SID for Nelly Furtado's *Do It*?
That fiasco – sampling Glenn Rune Gallefoss's SID cover of *Acidjazzed Evening* by Tempest – is more typical. It's not surprising to see how a record company and rich producer can behave, but it is disappointing. There's a trial in Miami in 2010 where it will all come out, and hopefully by then someone will have examined Timbaland's master project file. The chances of him having recreated *Acidjazzed Evening* independently with other equipment – making it so similar to the original that it sounds sampled – are zero. But lawyers have to claim ridiculous things and pretend to believe them, and judges often know or care even less about important technical issues. To sum up, when I hear about it, I think 'Not again', rather than 'Hey, a pile of money to be made suing people'. Court action is expensive, uncertain, lengthy and stressful. I'd rather people asked permission and negotiated fairly in advance.

■ What are your thoughts for the future of SID in a modern context?
If it breaks out of its niche, it will be by SIDs being cannibalised into modern hit songs. The possibilities are wide, though these days every man and his dog wants to do *Lazy Jones*. Lazy bastards, more like.

C64
Includes exclusive new mixes from Rob Hubbard
The music that inspired a generation
BACK IN TIME
Digital Studio Enhancements of Cult Classic Commodore 64 Anthems
PROJECT: GALWAY

» Paul Norman's *Forbidden Forest* is one of the earliest videogames with a contextual soundtrack changing as events unfold.

"I sometimes imagined that a larger tune was in there, but only three notes at any one time could get out" *Martin Galway*



better musician than I'd otherwise have been. I hated the limitations, but the C64 made me work harder, to distil the necessary essence of a song down to the smallest number of constituent parts.

What are your thoughts on the longevity and continuing popularity of music for the Commodore 64?

NB: I find it a bit hard to believe. My life's moved on so far that it's like it happened to another person. I got a call from a fan in Denmark a few years back, and it's one of the most surreal experiences of my life: 'Commodore 64 still rocks in Denmark!'

BD: It's great. When I wrote the tunes, I imagined orchestras and rock bands, and now remixes are being done like that. It's such a gas playing stuff I wrote 25 years ago with SID'80s and making it sound good. Sometimes, when I look back with my 25 years of musical sophistication [laughs], I sometimes think 'Oh my god', but they were good tunes with good melodies. People enjoy a good song they can sing. If you can pull that off on stage, it's great.

DW: It's nice people still take an interest, but it is a long time ago!

MW: I'm touched people not only remember, but still take the trouble to email me with their thanks for the enjoyment my music has given them over the years. I'm particularly chuffed with the remixes I've heard.

MG: I'm amazed that they're still getting referred to. Most gamers of the era are my age, and regard this thing as a way to remember their childhoods. But there are younger 'retro enthusiasts' who like the sound of early gaming chips! I'm not sure what it all means. Maybe there's an innocence that was lost when more powerful systems came out.

JH: It's nice that SIDs are remembered, but a little sad they're regurgitated. I wish people would focus on creating their own amazing new thing and just listen to old stuff for inspiration. But, overall, it is flattering people even care.

GM: I'm amazed that people are still interested. I abandoned the C64 around 1987 and don't entirely understand the C64 scene now – things have moved on. I'm not complaining, though. It's nice to be remembered.

JD: I love the fact that people are still interested enough to remix my old work. If you'd told me 20 years ago that people would be doing this, I wouldn't have believed you.

RO: In the end, it's nostalgia. We all grew up, but with the internet we can stay in our childhoods a little longer. For me, personally, I see SID remixes as an exercise. I respect the original SID and imagine how it would sound today if the composer were in the studio. It's nice when Galway or Daglish tells me my remix is pretty much what they had in mind when they composed their SID.

CH: Until recently I never thought about it. I focus on my career to get to the next step and live off my work. But we all laid the groundwork for videogame music and sound, and being part of a pioneer phase is very cool. That it's still honoured by the fans is a testament to what we did back then.

Special thankyou to: Stein Eikesdal (a.k.a. Stone Oakvalley): www.6581-8580.com, Warren Pilkington (zawtowers.org.uk), Manus Buchart for their help with images.

HOVER BOVVER

THE GRASS IS ALWAYS GREENER...

LLAMASOFT PRESENTS... JEFF MINTER'S
MUSICAL ARRANGEMENTS BY JAMES LIS
GAME PROGRAMMED BY JEFF MINTER
GAME DESIGN BY P.K. AND J.C. MINTE
© 1983 LLAMASOFT SOFTWARE

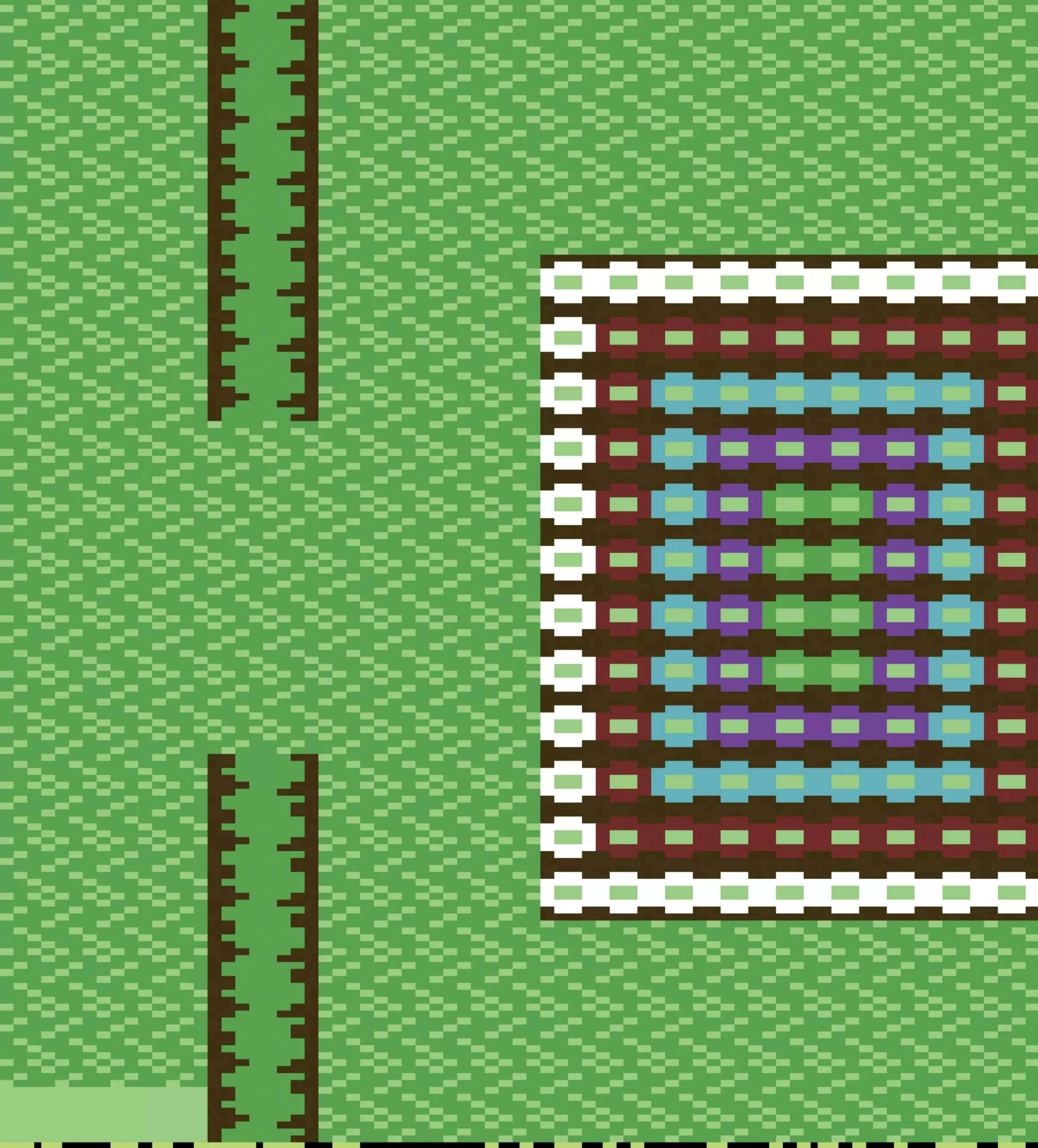
- **PUBLISHER:** LLAMASOFT
- **RELEASED:** 1984
- **GENRE:** ACTION
- **FEATURED HARDWARE:** COMMODORE 64
- **EXPECT TO PAY:** A FEW QUID

HISTORY

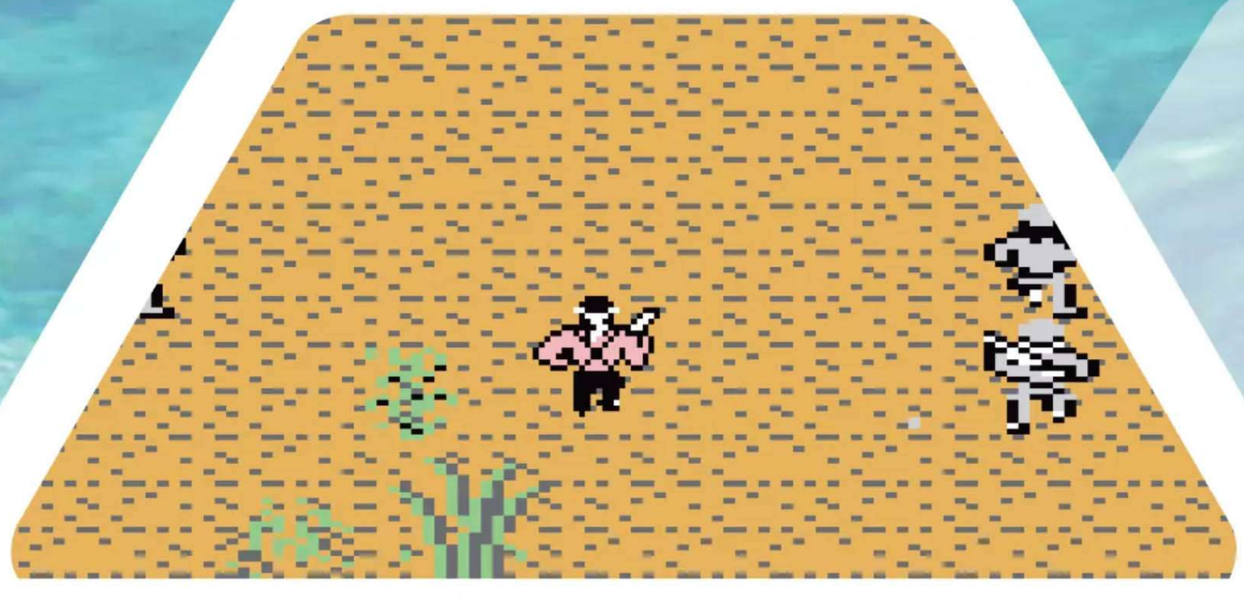
If there's one thing I like about the colder months, it's that I don't have to mow the lawn. You see, I get hay fever, and not just any old hay fever but the kind that makes me think someone sneaked into my bedroom late at night, filled my sinuses with liquid concrete, and then used my head for bongo practice until dawn. Clearly, partaking in an activity that flings considerable amounts of pollen directly into my nostrils isn't something I welcome.

Strangely, though, things I tend to dislike doing – driving and playing tennis, for example – are often the videogame subjects I'm most drawn to. Therefore, it should come as no surprise that I've spent a fair bit of time immersed in Jeff Minter's superlative mow-'em-up, the superbly named *Hover Bovver*. Ultimately, it's the larger-than-life elements within games that make them more interesting than the humdrum nature of reality. For example, careering around a corner at ridiculous speeds in *OutRun 2* is significantly more fun than pootling down the A331, wondering whether you should take the exit to Frimley, because there's usually a bit of a queue at Camberley. And so it is with Minter's videogame version of mowing. Instead of tediously pushing the mower back and forth across your lawn, while the sun tries its level best to melt your eyebrows, *Hover Bovver* gives you a turbo-charged mower, an angry neighbour to avoid (it's his mower that you've, er, 'borrowed'), a gardener to evade (should you accidentally mow over the flowers), and an 'attack dog' to keep loyal (or he attacks you rather than your foes).

It's not like these things don't exist in real life – while I'm unlikely to fling myself around winding country roads at 90 mph, *OutRun*-style, I could spice up my mowing experience by antagonising the dog, stealing my neighbour's mower and then careering headlong into every flowerbed in sight. It might not help my hay fever, but the ensuing chaos should at least take my mind off of it.


FLOWERS, YOU LUNATI
88

Ocean Software was one of the biggest names in the 8-bit videogame industry, and a massive presence on the Commodore 64. While it initially started off with poor licences of hit films and TV shows, it soon turned a corner, to became one of the most important developers in the industry. David Crookes explains how it all happened



OCEAN SOFT

t was one of the largest and most respected games publishers in the world – a company that produced movie tie-ins by the bucketload and converted dozens of top notch coin-op classics.

Nowadays, Ocean Software is nowhere to be seen, having been swallowed up by French firm Infogrames in the late 1990s.

But during the height of its dominance, the firm was frequently voted "software house of the year", its adverts plastered across almost every single computer magazine across two decades.

"And everyone hated us," says top Spectrum games programmer Jonathan Smith, who was at Ocean for three years from 1984 and was responsible for *Midnight Resistance* and the wrist-numbing *Daley Thompson's Super Test*.

"They were right to hate us. I buzzed off that!"

Ocean was founded by Liverpudlian David Ward, who had already achieved business success with a small chain of boutiques selling ethnic garb, which, in the early 1980s, was quite a trend.

Thinking he could get a good supply of gear from Morocco, fill up a van and bring it back to Britain to flog at a profit, he found himself languishing in a jail in Algerizas. With this in mind, he flew to Morocco for his next trip and did the deals on a more professional level and his clothing plan began to expand. But before long, he had spotted another trend, this time while on a trip to America. He saw potential in the fledgling computer games market and realised videogames would one day be a firm part of the entertainment business.

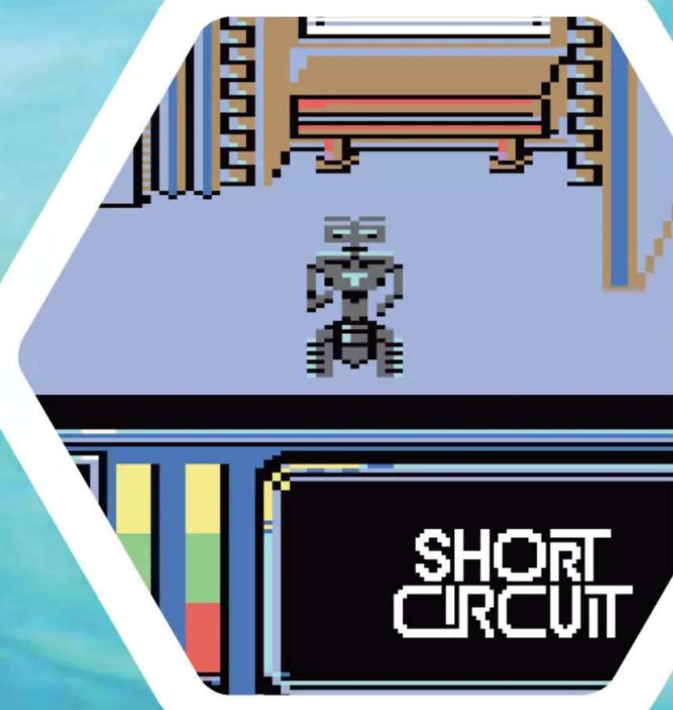
So, on his return to Britain in 1982, he set up Ocean Software as a publishing company. All he needed to do, he surmised, was find a group of talented programmers to produce a range of great games which he could market. By the end of the first year, Ward had five staff, a turnover of £500,000 and had sold 200,000 games. He became chairman, and his partner Jon Woods – who is now a major investor in Everton Football Club – was managing director. And the Ocean brand was established as the EA of its day, with around 60 programmers around Britain. Ward said in 1986: "As a publisher we wanted to cast our net as wide as possible so as not to exclude any creative forces."

After a couple of years, Ocean became a developer and snapped up young, emerging talent to work in-house. With an average age of 19, the programmers were loyal and keen. Ocean became based on Central Street in Manchester and there were certainly temptations outside the office, a stone's throw from the nightlife and shops of Deansgate. But the programmers hardly saw daylight – they were holed up in the building's basement and, to make matters worse, there was an alcohol ban, possibly because it was a former Quakers building. And a supposedly haunted one at that.

Artist Brian Flanaghan says: "The building was on a burial ground and there is still a plaque on the Central Street car park explaining the history - and the fact that there are still scores of remains buried there. "And where were we? In the basement! Some people mentioned feelings of 'not being alone' during all nighters, but I can't say I saw or felt anything supernatural..."

IN BRIEF

Ocean was the Electronic Arts of the Eighties, a big, brash, software house obsessed by film and arcade licenses. Set up by Liverpudlian entrepreneur David Ward in Manchester in 1982, it was first a publisher, then a developer. Ocean initially produced a string of terrible games but managed to sell them, generating enough cash to go on to create bigger and better games. Ambitious plans in 1996 to reorganise Ocean in light of the new consoles were scrapped when Infogrames bought the company. Three years later, the brand was no more.



WARE

But why Manchester? "I can't remember why Ocean set up offices in Manchester" says Gary Bracey, former development director at Ocean who started at the firm in 1985. "Both Jon and David were from Liverpool but I think they believed Manchester had a more credible commercial perception than Liverpool, due to the left wing image it portrayed at the time. Image was certainly important. David and Jon were marketing people first and foremost and built the company on their creativity and drive to succeed. But while it may have been outwardly perceived as a well-oiled, professional organisation, inside, Ocean was a ball of sheer energy, running on the power of the developers' talents and the managers' enthusiasm and beliefs."

The in-house talent at Ocean began to grow substantially, but Ocean was also proud of its external resources, which included Jon Ritman and Bernie Drummond, Denton Designs, Sensible Software and Digital Image Design which produced some of the finest flight sims the market had seen. But those early days of games development at Ocean were a real seat-of-the-pants affair, according to Bracey.

He said the games gestated at the whims of the programmers and artists' creative freedoms were encouraged, but indulgences had to be reined in due to that ever-present threat of slippage.

Yet many of those early games were hardly ground-breaking, even though they often carried big names from *Knight Rider* through *Street Hawk*, to Hasbro's *Transformers*.

That's because Ward believed the key to good game sales was to make it recognisable to consumers. This led to scores of film and arcade licences being secured – many of which were absolutely dire. "If you forget that *Knight Rider*/*Street Hawk* period then Ocean will always be remembered with fondness," laughs Mark Jones (a graphic designer who spent two years at Ocean) recalling the terrible state of those two games.

Jones, starting at Ocean in January 1987, worked on some of the developers more classic games from *Total Recall*, *Gryzor* and *Wizball* to *Arkanoid*, *Vindicator* and *Rambo III*. By this time, Ocean was establishing its brand and sales were buoyant. Ocean, with a £10 million turnover, was employing 62 staff and had sold three million games for a range of computer formats. It had also snapped up Imagine Software – one of the high-profile casualties of a downturn in sales in the mid-Eighties. Imagine, based in Liverpool, had a reputation for producing excellent games for the 8-bit machines with *Renegade* and *Yie Ar Kung Fu* just two of the classics.

But in that pursuit of excellence, financial control had gone by the wayside, so Imagine – and its international reputation – was cemented with the Ocean brand and became devoted to arcade games, in particular conversions from Konami coin-op titles such as the aforementioned *Yie Ar Kung Fu* and *Hypersports*.

This meant Ocean was getting bigger than ever, in both financial and influential terms. Not only was it able to tap into the vast talent at Imagine Software, its own programmers were starting to knock out some outstanding titles and they were beginning to really enjoy themselves. Jones certainly recalls being impressed by the firm when

» Ocean worked on a large number of arcade conversions, many of which were of a very high quality. This is *Hunchback*, and it's ace.

» Bill Harbison had a problem drawing the Batmobile. So kapow...he bought the toy!

OCEAN'S FREELOAD

Nobody liked loading games from tape and all were grateful to Paul Hughes for creating Ocean's Freeload which quickened the process and provided protection against piracy. The first Ocean game to use Freeload was *Wizball* on the Commodore 64 in 1987. It replaced a previous tape loader, displaying a picture and, on the C64, playing music as the game loaded.

The loader came complete with an excellent tune, created by Martin Galway, Peter Clarke or Johnathan Dunn. "They were all prolific musicians," Hughes says. "You just asked for a new piece for the loader and they'd oblige."

When Ocean released its budget label, Hit Squad, the games were duplicated by Ablex in Birmingham. A cheap duplication machine was used which couldn't duplicate Freeload at high speed and Hughes had to slow the loader down, which led to Jon Dunn having to write new loading music. "His original tune was too short and ran out before the load finished," Hughes laughs.

he went for an interview in December 1986. "My interview, which I attended with my mum because I'd never been on a train on my own let alone gone to a different town, was relaxed," he says. "Gary Bracey was very friendly. The general feel of the place was that we all wanted to do our best and produce games that were as good as we could make them."

Ocean rewarded this work by crediting the programmers, artists and musicians on the games themselves, a rarity at the time, and this helped to motivate the staff.

Jones says: "These games were going out with our names on them as well as the Ocean or Imagine name. You wanted them to be good. If not just for the good of the company but for selfish reasons too. If it had 'Mark R. Jones' on it, I didn't want anything to look rubbish."

While the programmers toiled at their keyboards, Bracey and games producer Lorraine Broxton wandered around, taking an active interest in what was going on, what was new and what had been changed.

Other games programmers also took regular screen breaks to see what others were doing.

Jones says: "You couldn't just sit there at your computer screen from 9.30am till 5pm. Sometimes it would get to the stage where you'd been looking at a game for so long, you couldn't tell if it was any good or not. It meant everyone was aware of what everyone else was doing – if you'd produced something bad, there would be no beating about the bush."

Jones' first project was *Wizball*. He had never produced an animated sprite before so gained help from Simon Butler and Ronnie Fowles, who'd just finished the graphics for *Short Circuit* and were in the late stages of *Arkanoid*, both for the Spectrum. "They explained to me how to use the in-house Ocean animation program. This was an amended version of Melbourne Draw with animation capabilities," Jones says. But he is still not happy with the result, despite the game achieving both a Crash Smash and Sinclair User Classic.

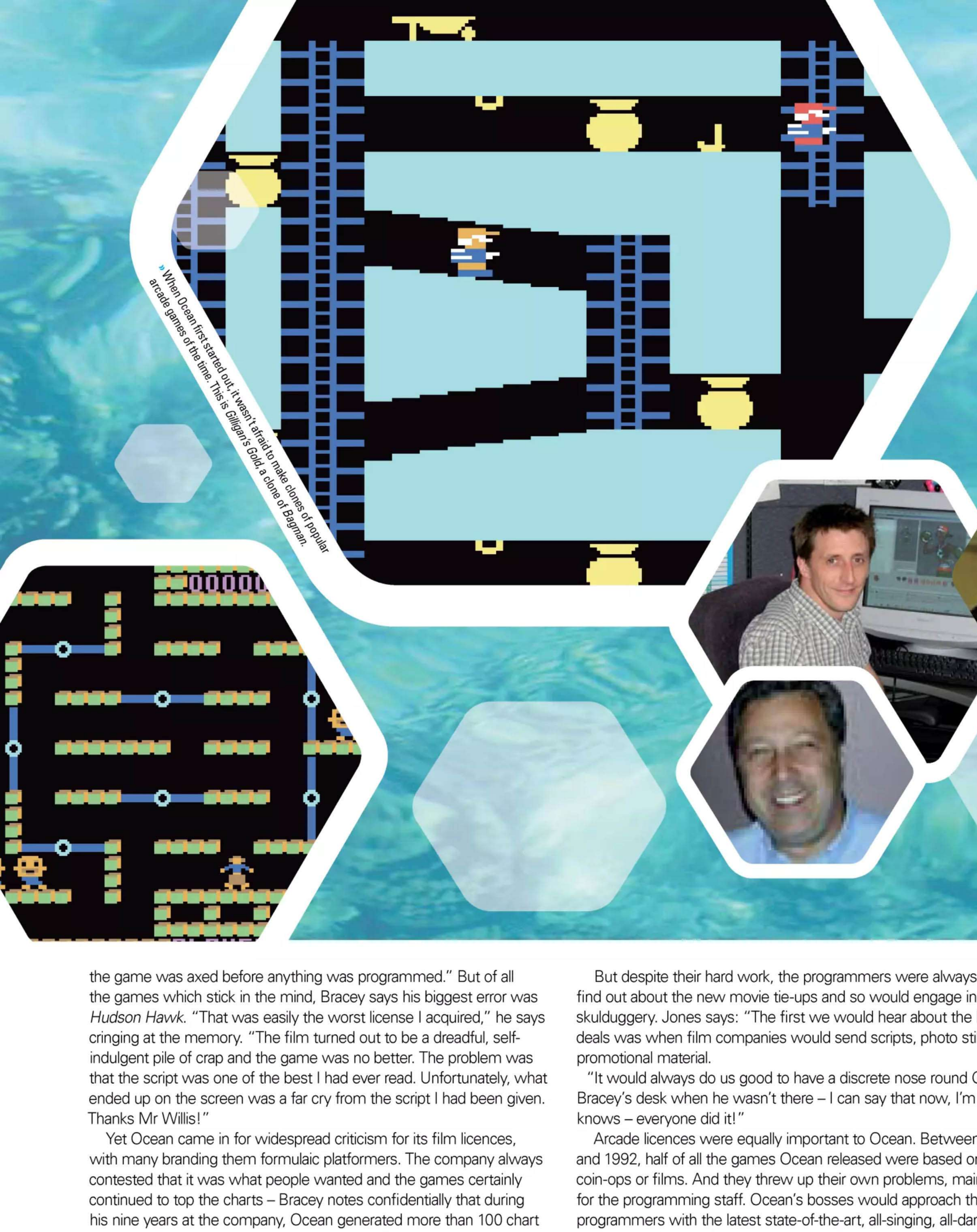
He says: "The programmer of *Wizball* was also new and lots of stuff I'd created was left out. All I see when I look at it is what it could have been. The programmer left the project a month before it was due to be completed and it had to be handed to Paul Owens to finish."

Although Ocean developed many original titles, film licences were king. Videogaming was still in its infancy, although movie merchandising had been prevalent ever since *Star Wars* became a multi-million spin-off industry in 1977. But until Ocean appeared, making the game-of-the-film was still relatively unheard of. Some companies had tried it and been bitten - Atari spent $22 million on *ET: The Extra Terrestrial* only to end up with a terrible game and extremely low sales. Ocean was determined to do it right.

Bracey said: "At first, you could get the licences themselves relatively inexpensively as the movie companies hadn't yet realised the potential income that could be generated so we snapped them up. Eventually, we were building such a strong track record in terms of sales for licensed games, that I started to get flooded with scripts from movie companies actually wanting us to license their titles. That meant key titles like *Batman* weren't that hard to acquire."

One of Ocean's best movie licenses was *Robocop* – Bracey's favourite. "The box-office was pretty good for this low budget movie, and we produced a first-rate game based on it. We then went on to sub-licence and produce the game on all other formats including the new NES console system and an actual coin-op machine. The game sold millions of units in all of its entities and it was probably one of the most lucrative titles Ocean ever had – I seem to recall that the licence was not terribly expensive."

But there were some mistakes. Artist Brian Flanaghan says: "We went after some crazy stuff, like *Michael Jackson's Thriller* for the NES and there was mention of a U2 bid – neither came to fruition. "There was also *Radio Flyer*, a licence apparently based around a popular American child's 'pull kart' thing. After reading the script, it turned out the film was about child abuse! Great gaming material there. Obviously



» When Ocean first started out, it wasn't afraid to make clones of popular arcade games of the time. This is *Gilligan's Gold*, a clone of *Bagman*.

» **Left to right:** Top man; Gary Bracey was software director from 1985 to 1995. Brian Flanagan: Co-founder; David Ward created Ocean and raked in the cash. He is now boss at iFone, which makes games for mobile phones. Graphic genius; Artist ,Simon Butler, worked on loads of Ocean games including *NOMAD*, *Miami Vice*, *Total Recall*, *Navy Seals* and *Addams Family*

the game was axed before anything was programmed." But of all the games which stick in the mind, Bracey says his biggest error was *Hudson Hawk*. "That was easily the worst license I acquired," he says cringing at the memory. "The film turned out to be a dreadful, self-indulgent pile of crap and the game was no better. The problem was that the script was one of the best I had ever read. Unfortunately, what ended up on the screen was a far cry from the script I had been given. Thanks Mr Willis!"

Yet Ocean came in for widespread criticism for its film licences, with many branding them formulaic platformers. The company always contested that it was what people wanted and the games certainly continued to top the charts – Bracey notes confidentially that during his nine years at the company, Ocean generated more than 100 chart number ones.

Although Bracey has admitted the majority of games weren't anything special, he puts that down to the sheer quantity of titles Ocean produced, yet firmly believes there were many gems which hit the mark – not least *Batman*, which had many sub-games, *Robocop 3*, enhanced by its driving and shoot-'em-up sections, *Addams Family*, a massive platform game, and *Hook*, a true adventure game. And he points to the solid hits *F-29*, *Battle Command*, *Push Over*, *Sleep Walker* and *Wizkid*, as notable, original 16-bit games.

Nevertheless, film licences were the most important and the need to get them out at around the same time as the movie put a lot of pressure on Ocean's staff, who were often given very strict deadlines.

This would mean some heavy stints for the programmers and it was not unknown for some of them to work a shift far in excess of 24 hours to get the game finished and down to the duplicators.

Any laughter that would usually emanate from down below in the basement would quieten during these tense periods of time. Programmer Paul Hughes said: "The in-house crew had some absolutely incredible talent that didn't blink at the thought of working 72 hours straight and then driving to the duplicators with the master."

But despite their hard work, the programmers were always last to find out about the new movie tie-ups and so would engage in a little skulduggery. Jones says: "The first we would hear about the latest deals was when film companies would send scripts, photo stills and promotional material.

"It would always do us good to have a discrete nose round Gary Bracey's desk when he wasn't there – I can say that now, I'm sure he knows – everyone did it!"

Arcade licences were equally important to Ocean. Between 1983 and 1992, half of all the games Ocean released were based on coin-ops or films. And they threw up their own problems, mainly for the programming staff. Ocean's bosses would approach their programmers with the latest state-of-the-art, all-singing, all-dancing arcade machine – telling them their next project was to convert it to the humble Spectrum, C64 or Amstrad.

As Simon Butler recalls, "It was a challenge, but also a major pain."

Many of Butler's games were coin-op conversions or film licenses. He worked on titles spanning almost all of Ocean's lifespan from *The Never-Ending Story*, *Platoon*, and *Combat School*, to *Total Recall*, *Darkman*, and the *Addams Family* and all had to be faithful to the film or arcade, a difficult task.

It was a challenge also faced by graphic designer Bill Harbison, who joined Ocean in March 1988.

"I was really proud of my coin-op conversion of *Chase HQ*," he says when we asked him about his excellent conversion. "We had the arcade machine of *Chase HQ* so I could copy the graphics, although we didn't have the technology to strip the graphics from the arcade board so I played the game with one hand and had a pencil in the other to make sketches. *Batman* was easier, the only difficulty being I had little reference material to draw the Batmobile convincingly in 3D and couldn't get it right – even with a week to go to completion. Luckily some *Batman* toys were available. I bought myself a small Batmobile and used it to draw the finished sprites."

OCEAN AND AMSTRAD

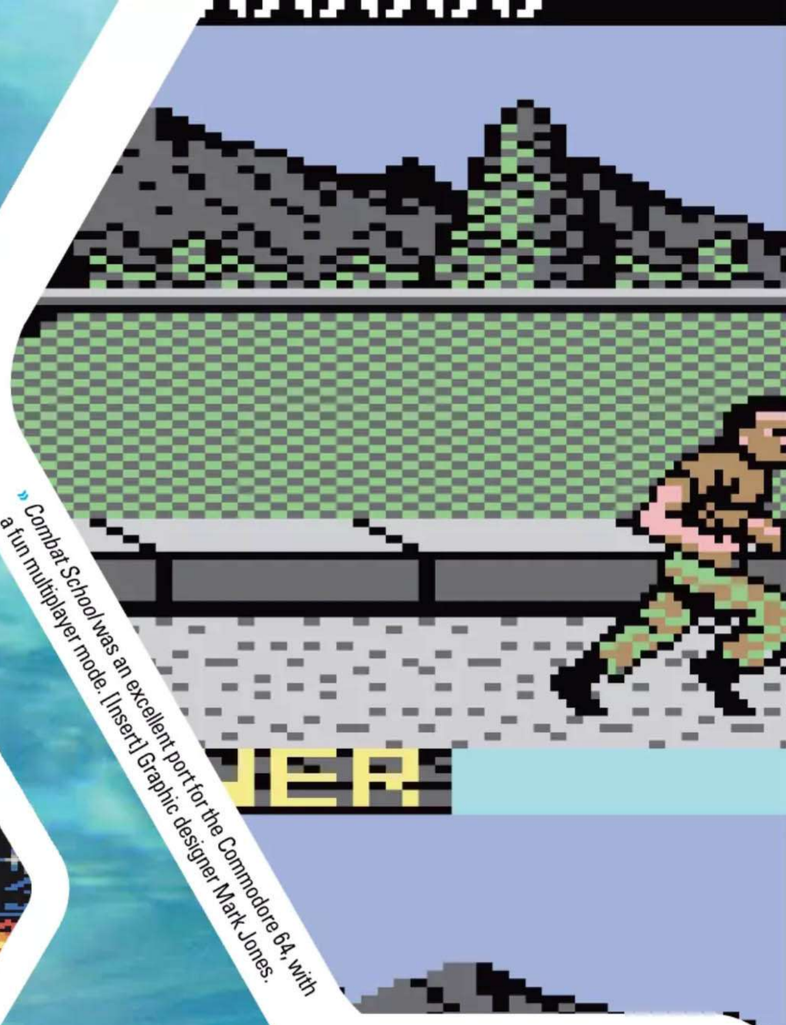
When Amstrad decided to produce its ill-fated GX4000 console, it knew it needed some big names to back it up. And at the time – 1990 – Ocean was the top software house and the two companies soon came to a deal, along with Gremlin, Titus, Loricel, and Domark.

Amstrad gave the companies free reign to create any game they wanted, the only stipulation was that the packaging had to follow a pre-set format. Ocean then knocked out a series of games although, sadly, many were straight ports of existing CPC titles, only sold at vastly inflated prices.

But then, money was the important thing. Sir Alan Sugar said as much at the launch. "We don't just see this as Amstrad fighting Nintendo and Sega," he said, talking about the battle for console dominance. "We see this as Amstrad, together with companies such as Ocean and others who want to make some money and who do not want to be dictated to, fighting against these people."

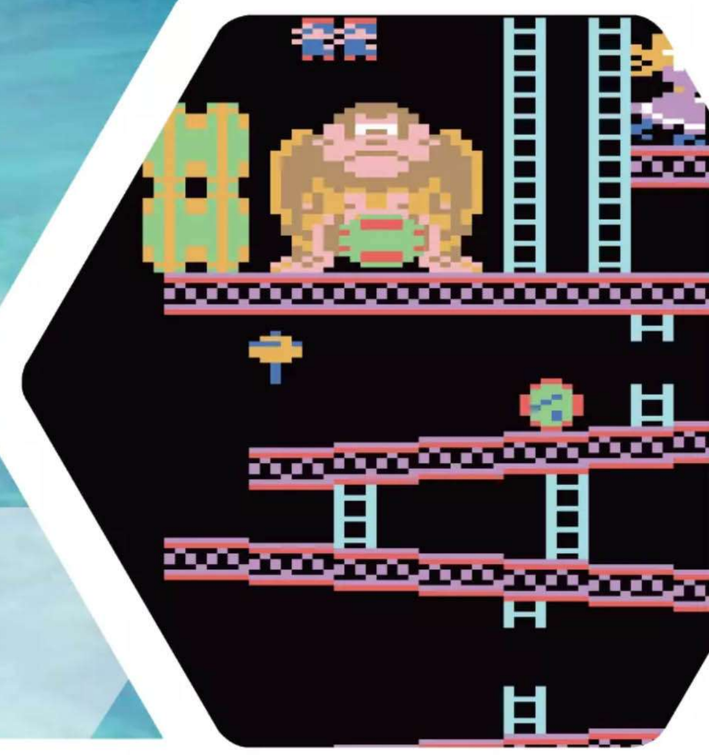
Ocean's *Burnin Rubber* game was created specially for the GX4000 and was bundled with the machine.

Ocean also created games for another 8-bit inspired console, the Commodore 64GS. Unfortunately, that too ultimately failed.



» Combat School was an excellent port for the Commodore 64, with a fun multiplayer mode. [Insert] Graphic designer Mark Jones.

» Ocean worked on a number of impossibly slick platformers. *The Addams Family* was one of its best.



"OF ALL THE GAMES WHICH STICK IN THE MIND, BRACEY SAYS HIS BIGGEST ERROR WAS HUDSON HAWK. 'THAT WAS EASILY THE WORST LICENCE I ACQUIRED, THE FILM WAS A PILE OF CRAP'"

MAGAZINES

"Everyone hated us," says Jonathan Smith - but was that the case? Certainly, the top computer magazines of the 1980s and early 1990s thrived off Ocean – if only because of its advertising.

Gary Bracey says: "Obviously, we spent a small fortune advertising in magazines and so they were wary of upsetting us too much. But in general, if one of our games sucked then they said so and were equally enthusiastic if the title warranted it."

Mark Jones agreed: "From my experience the magazines loved Ocean. They were always nice and friendly when they came round. Every now and again you'd get a mag come in and do the rounds, having a look at what was in development. They'd sit down and you'd talk them through what you were doing, what stage the game was at and what was to be done. Ocean were always given good write-ups when the magazines were previewing games. We'd do what we could for the magazines, providing screenshots and sometimes demos for them to take away."

There were some problems, however. Bracey says: "There were one or two journalists who just hated Ocean and we knew that they would always give us a poor score no matter what the game genuinely deserved."

While developing a game, staff would wear many hats including those of storyboard artist, producer, character designer, game designer, and copywriter. Butler says: "We got involved in many parts of the game and we cared for them. It rankled when we were pipped to the number one slot in the charts or when we missed out on a plum licence or franchise."

Much of that was because Ocean's greatest rival, US Gold, was breathing down their necks, even though Ward and Woods had a large stake in the company. From time to time, the two companies worked together, particularly on compilations, bringing together the best of both firms in treats such as *They Sold A Million* including Ocean's *Daley Thompson's Decathalon* and US Gold's *Beach Head*. But in every other respect, the pair were at war. When they became concerned there were budget houses flogging software for £1.99 as opposed to full price, they each set up rival low-price labels, US Gold forming Kixx and Ocean creating The Hit Squad, to sell old games first at £2.99, later at £3.99.

Bracey said: "There really was serious rivalry between Ocean and US Gold. We wanted to be the best and wouldn't rest on our laurels. But as time passed and we entered the console era then I think our main competitors became companies like Acclaim – though the competition and desire to be the best remained."

Competition extended inwards too. Butler says: "There was a sense of camaraderie at Ocean but also a healthy sense of competition between the various teams; to top the animation, to better the graphics or, in the coder's field, to have more sprites, bigger sprites - for your code to be better or faster."

"But it got harder with the 16-bits," adds Jones. "Instead of a few hours putting pixels in the right place to make a character die convincingly on the 8-bits, you spent double the time making sure the shading was correct or light was coming in from the same place."

As time went by, Ocean adapted to the changing market conditions. Games switched from being programmed by a few to being tackled by masses. And the threat of the big American and Japanese companies was brushed aside, with Bracey saying Ocean was excited and not scared by the challenge.

Ocean had spent a couple of years in the early Nineties worrying about how the industry was going to develop. But around 1994, it set up a new in-house development team, Tribe, and head of software development Ian Turnbull decided a professional, structured way of working was needed if Ocean was to make the massive jump from 8/16-bit to 32/64-bit.

Separate teams were created, each having a team leader, lead programmer and designer. Games were developed off-screen six months before any coding began and by 1996 there were 80 Tribe staff members. But in that same year, French firm Infogrames came sniffing and snapped up Ocean. It retained the Manchester office for development until Infogrames bought Gremlin in 1999 and programming was moved to Sheffield. Not long after, the Ocean brand was dropped. *GT 64 Championship Edition* for the Nintendo 64 was the last game by Ocean in 1998.

Flanagan said: "The initial feeling when Infogrames took over was good. We had a new shiny building, and this strange French megacorp was going to put lots of money into the company. But then certain games weren't released. I was working on *The Shadow* for the SNES and Mega Drive and had designed the sprites and a large proportion of the backgrounds. I also designed the game and was the lead artist but, sadly, the game was never released as the filmed bombed massively."

Many of the old Ocean guys – and gals – have not gone away completely, however. As well as most being involved in the industry in some way, they also chat on the forums at – www.theoceanexperience.co.uk.

Jones added: "It's sad in a way that the Ocean name has gone but good in another. I guess it means it will always remind misty eyed 30-something gamers of a time when games didn't have to rely on fancy FMVs and flashy graphics in order to impress."

SOFTOGRAPHY

1983

Royal Birkdale: Championship Golf (Spectrum)
Digger Dan (Spectrum)
Island Of Death (Oric)
Armageddon (Spectrum)
Rescue (Spectrum)
Pogo (Spectrum)
Android 2 (Spectrum, C64)
Rollerball (C64)

1984

Gift From the Gods (Spectrum)
Gilligan's Gold (Spectrum, C64, Amstrad)
Robotics (Spectrum)
Eskimo Eddie (Spectrum, C64)
Hunchback (Spectrum, C64, Amstrad)
Bruce Lee (Spectrum)
Mr. Wimpy (Spectrum, C64)
High Noon (Spectrum, C64)
Cavelon (Spectrum, C64)
Moon Alert (Spectrum)
Daley Thompson's Decathlon (Spectrum, C64, Amstrad)
Chinese Juggler, The (Spectrum, C64)
Kong (Spectrum, C64)
Transversion (Spectrum)
Bangers and Mash (C64)
Spellbound (C64)

1985

Hunchback 2: Quasimodo's Revenge (Spectrum, C64, Amstrad)
Kong 2: Kong Strikes Back (Spectrum, C64, Amstrad)
Match Day (Spectrum, C64, Amstrad)
Neverending Story, The (Spectrum, C64, Amstrad)
Daley Thompson's Supertest (Spectrum, C64, Amstrad)
Pud Pud in Weird World (Spectrum)
Rambo (Spectrum, C64, Amstrad)
Frankie Goes to Hollywood (Spectrum, C64, Amstrad)
Tornado Low Level (Spectrum, C64)
Roland's Rat Race (Spectrum, C64)
A Fi$tful of Buck$ (C64)
Cosmic Wartoad (Spectrum)
V (Spectrum, C64, Amstrad)

1986

Platoon (Spectrum, C64, Amstrad, Amiga, Atari ST)
Street Hawk (Spectrum, C64, Amstrad)
N.O.M.A.D. (Spectrum, C64, Amstrad)
Nightmare Rally (Spectrum)
Donkey Kong (Spectrum, C64, Amstrad)
Superbowl (Spectrum)
Great Escape, The (Spectrum, C64, Amstrad)
Gryzor (Spectrum, C64, Amstrad)
Nexus (Spectrum)
Miami Vice (Spectrum, C64, Amstrad)
Helikopter Jagd (C64)
Highlander (Spectrum, C64, Amstrad)
Transformers (Spectrum, C64)
Hunchback II (Spectrum, C64, Amstrad)
Hunchback – The Adventure (Spectrum, C64)
Cobra (Spectrum, C64, Amstrad)
Mailstrom (Spectrum)
Laser Sprite Generator (Spectrum)
It's A Knockout (Spectrum, C64, Amstrad)
Knight Rider (Spectrum, C64, Amstrad)
Batman (Spectrum, C64, Amstrad)
Army Moves (Spectrum)
Parallax (Spectrum, C64)

1987

Wizball (Spectrum, C64, Amstrad, Amiga, Atari ST)
Short Circuit (Spectrum, C64, Amstrad)
International Match Day (Spectrum, C64, Amstrad)
Mario Bros (Spectrum, C64, Amstrad)
Starace (C64)
Match Day 2 (Spectrum, C64, Amstrad)
Slap Fight (Spectrum)
Flashpoint (Spectrum)
Top Gun (Spectrum, C64, Amstrad)
Double Take (Spectrum, C64)
Mutants (Spectrum, C64)
Tank (Spectrum, C64, Amstrad)
Tai-Pan (Spectrum, C64, Amstrad)
Head Over Heels (Spectrum, C64, Amstrad, Amiga, Atari ST)
Road Race (Spectrum)
Super Bowl XX (Spectrum, C64)
Combat School (Spectrum, C64, Amstrad)
Eco (Amiga, Atari ST)

1988

Gutz (Spectrum, C64)
Typhoon (Spectrum, C64, Amstrad)
Cabal (Spectrum, C64, Amstrad, Amiga, Atari ST)
Emilio Butraguemo 1 (Spectrum, C64, Amstrad)
Operation Wolf (Spectrum, C64, Amstrad, Amstrad GX4000, Amiga, Atari ST)
Rambo 3 (Spectrum, C64, Amstrad, Amiga, Atari ST)
Phantom Club (Spectrum, Amstrad)
Firefly (Spectrum, C64)
W.E.C. Le Mans (Spectrum, C64, Amstrad)
Batman – The Caped Crusader (Spectrum, C64, Amstrad, Amiga, Atari ST)
Psycho Soldier (Spectrum)
Track & Field (Spectrum)
Daley Thompson's Olympic Challenge (Spectrum, C64, Amstrad)
Madballs (Spectrum, C64, Amstrad)
Moonshadow (C64)
Where Time Stood Still (Spectrum)

1989

Red Heat (Spectrum, C64, Amstrad, Amiga, Atari ST)
Chase HQ (Spectrum, C64, Amstrad, Amiga, Atari ST)
Operation Thunderbolt (Spectrum, C64, Amstrad, Amiga, Atari ST)
Robocop (Spectrum, C64, Amstrad, Amiga, Atari ST, GameBoy)
Run the Gauntlet (Spectrum, C64, Amstrad, Amiga, Atari ST)
Beach Volley (Spectrum, C64, Amstrad, Amiga, Atari ST)
Batman – The Movie (Spectrum, C64, Amstrad, Amiga, Atari ST, PC)
New Zealand Story, The (Spectrum, C64, Amstrad, Amiga, Atari ST)
Untouchables, The (Spectrum, C64, Amstrad, Amiga, Atari ST, NES, MSX)
Emilio Butraguemo 2 (Spectrum)
F29 - Retaliator (Amiga, Atari ST, PC)
Voyager (Amiga)

1990

Shadow Warriors (Spectrum, C64, Amstrad, Amiga, Atari ST)
Robocop 2 (Spectrum, C64, Amstrad GX4000, Amiga, Atari ST, GameBoy)
Rainbow Islands: Bubble Bobble 2 (Spectrum, C64, Amstrad, Amiga, Atari ST, GameBoy)
Midnight Resistance (Spectrum, C64, Amstrad, Amiga, Atari ST)
Puzznic (Spectrum, C64, Amstrad, Amiga, Atari ST)
Sly Spy: Secret Agent (Spectrum, C64, Amstrad, Amiga, Atari ST)
Chase HQ 2: Special Criminal Investigations (Spectrum, C64, Amstrad GX4000, Amiga, Atari ST)
Narc (Spectrum, C64, Amstrad, Amiga, Atari ST)
Plotting (Spectrum, C64, Amstrad, Amiga, Atari ST)
Pang (Spectrum, C64, Amstrad GX4000, Amiga, Atari ST)
Night Breed (Spectrum, C64, Amstrad, Amiga, Atari ST)
Adidas Championship Football (Spectrum, C64)
Adidas Championship Tie-Break (Spectrum)
Lost Patrol (Amiga, Atari ST, PC)
Ivanhoe (Amiga)
Shadow Of The Beast (C64, Amstrad, Amiga, Atari ST)
Burnin Rubber (GX4000)

1991

Toki (Spectrum, C64, Amiga, Atari ST)
Navy Seals (Spectrum, C64, Amstrad, Amiga, Atari ST, GameBoy)
Double Dragon (Spectrum, C64, Amstrad, Amiga, Atari ST)
Total Recall (Spectrum, C64, Amstrad, Amiga, Atari ST)
Battle Command (Spectrum, C64, Amiga, Atari ST)
Smash TV (Spectrum, C64, Amstrad, Amiga, Atari ST)
Simpsons: Bart Vs The Space Mutants (Spectrum, C64, Amstrad, Amiga, Atari ST)
Hudson Hawk (Spectrum, C64, Amstrad, Amiga, Atari ST)
Darkman (Spectrum, C64, Amstrad, Amiga, Atari ST, NES, Game Boy)
Terminator 2: Judgement Day (Spectrum, C64, Amstrad, Amiga, Atari ST)
WWF WrestleMania (Spectrum, C64, Amstrad, Amiga, Atari ST)
Addams Family, The (Spectrum, C64, Amstrad, Amiga, Atari ST, SNES, Game Boy)
Elf (Amiga, Atari ST, PC)

1992

WWF European Rampage Tour (C64, Amiga, Atari ST)
Cool World (C64, Amiga, Atari ST, NES, Game Boy)
Robocop 3 (Spectrum, C64, Amiga, Atari ST, NES)
Spacegun (Spectrum, C64, Amiga, Atari ST)
Epic (Amiga, Atari ST, PC)
Hook (C64, Amiga, Atari ST, SNES, NES, Mega Drive, Game Boy, Game Gear)
Lethal Weapon (Spectrum, C64, Amstrad, Amiga, Atari ST, SNES, NES, Game Boy)
Parasol Stars: Rainbow Islands II (Amiga, Atari ST, PC, Game Boy)
Pushover (Amiga, Atari ST, PC, SNES)
Sleepwalker (C64, Amiga, Atari ST)
Wizkid (Amiga, Atari ST)

1993

Dennis The Menace (Amiga, Amiga CD32, SNES, Game Boy)
Jurassic Park (Amiga, NES, Mega Drive, Sega Master System, Game Boy, Game Gear)
Ryder Cup Golf (Amiga)
Shut-It (PC)
Retee 2 (Amiga)

1994

Inferno (PC)
Eek The Cat (SNES)
Jungle Strike (Amiga, Amiga CD32)
Kid Chaos (Amiga)

1995

The Raiden Project
Mr Nutz (Amiga, Sega Mega Drive, SNES, Game Boy)

1996

Break Point (PlayStation)
Cheesy (PlayStation)
Tunnel B1 (PlayStation, Sega Saturn)
World Rally Fever (PC)
X2 (PlayStation)
Zero Divide (PlayStation)

1997

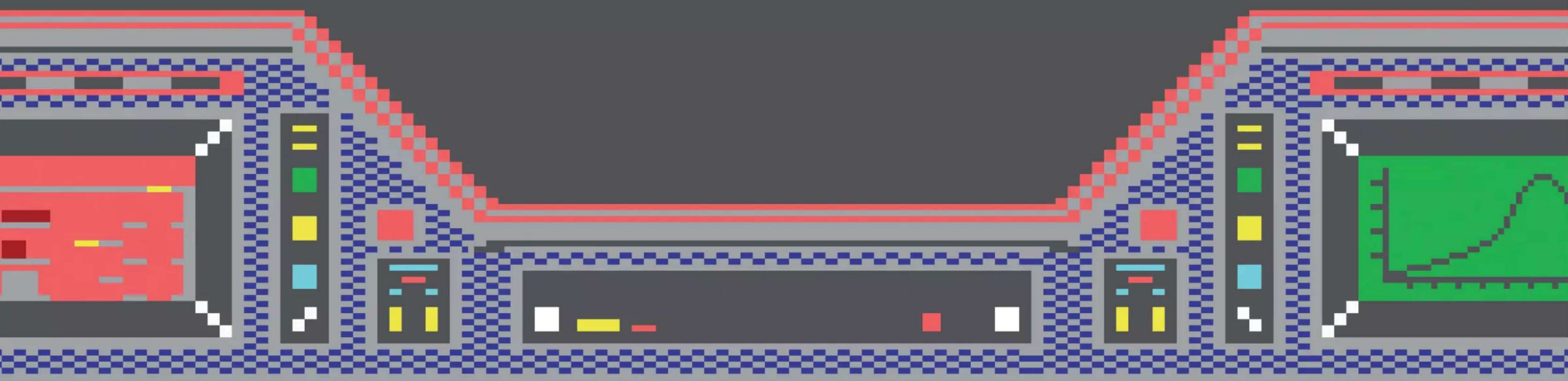
(I-War) (PC)
Jersey Device (PlayStation)
Total Drivin (PlayStation)
Multi-Racing Championship (N64)

1998

Fighters Destiny (N64)
Mission: Impossible (N64)
Wetrix (N64, PC)
Viper (PlayStation)
Zero Divide 2 (PlayStation)
GT 64 Championship Edition (N64)

THE CLASSIC GAME

IMPOSSIBLE MISSION



Your mission – should you choose to accept it – is to infiltrate the base of professional full-time megalomaniac Professor Elvin Atombender.

Atombender is threatening to perform genocide through the hacking of national security computers in order to launch a nuclear missile strike. We have traced Atombender to his underground silo and have assigned you the impossible mission of putting a stop to his plan. This mission will be tough, this mission will be fraught with danger and this mission will self-destruct in six hours, so get your skates on. Oh, and make sure you take a short minute break after four hours – we really don't want Bridget from HR breathing down our backs. You know how she gets.

AGENT 4125

The hero of *Impossible Mission* goes by the name – or, rather, number – of Agent 4125. It doesn't roll off the tongue like 007, and kind of gives the impression that the administration he's employed by is either heavily overstaffed or rubbish at spy training.

ROVER BALL

As well as droids, the player must also be wary of these *Prisoner*-inspired electrified black balls that guard some of Professor Atombender's rooms. Far more aggressive than the droids, most will annoyingly hone in on 4125 killing him on contact.

PROF. ELVIN ATOMBENDER

With the name Atombender, you could argue Elvin was destined for a gainful career as an evil mastermind, or a superhero. Elvin is the balding spectacle-wearing villain of the piece. From his underground stronghold he's trying to hack global security systems to launch an attack on the world.

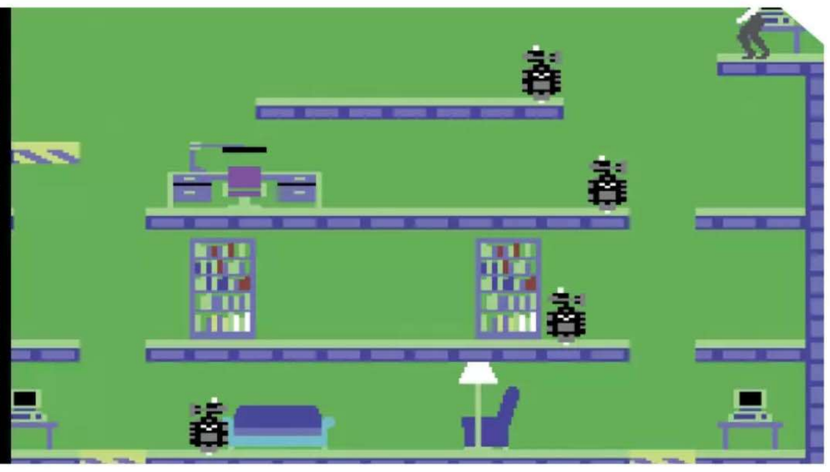
DROIDS

Atombender has a series of security droids patrolling his underground base to attack any unwanted visitors, such as you. These Dusty Bin-style droids have various attack types: some will chase the player, others behave erratically and some fire lasers.

COMPUTERS

If you've found an 'init lift' or 'snooze' code then you can upload it to one of these computer terminals to either reset the lifts or put all the machines inside that room into temporary sleep mode. This makes searching objects in well-guarded rooms far easier.

WHY IS IT A CLASSIC?



It's just impossibly good

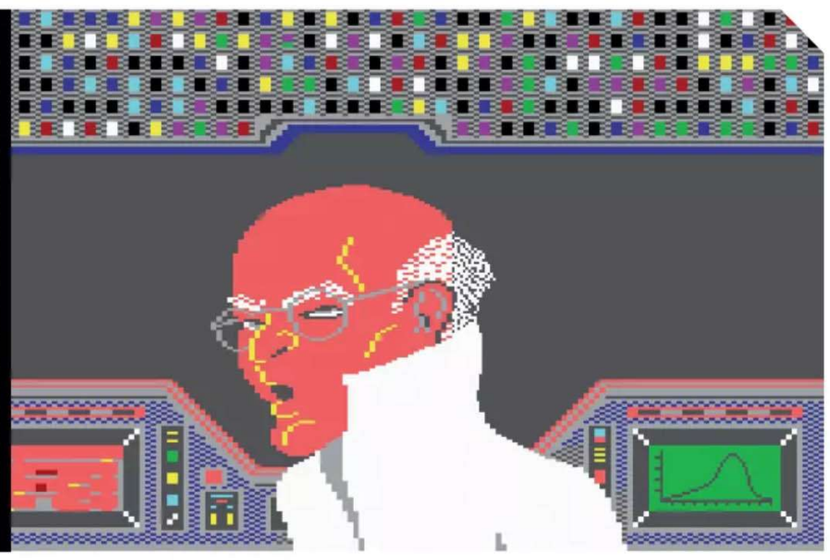
A solid C64 classic, *Impossible Mission* wowed gamers and critics on its release thanks to a mix of great visuals, slick animation, and James Bond-style spy themes (although the game was said to actually have been more inspired by the movie *WarGames*). On top of this, the game also had that all-important one-more-go quality, brought about by a six-hour deadline looming over the player and the fact that the game's level layouts regenerated – it's the game that kept on giving. *Impossible Mission* is essentially the thinking person's platformer, and remains the ultimate espionage action game for the C64.

POSSIBLE MISSION?

Your mission, debriefed… briefly

Despite what its title insinuates, your mission was actually pretty straightforward. Agent 4125 has just six in-game hours – with each death docking ten minutes off the time limit – to find the nine parts of a password that will gain him entrance to Atombender's control room. 4125 must venture throughout the evil professor's labyrinthine underground hideout and search his furniture (Atombender is a little careless it would appear) for the 36 puzzle pieces and then decipher the nine-letter password. With the code cracked, entry to the control room is granted and the game is finished.

STANDOUT MOMENT #1



Mouthy megalomaniac

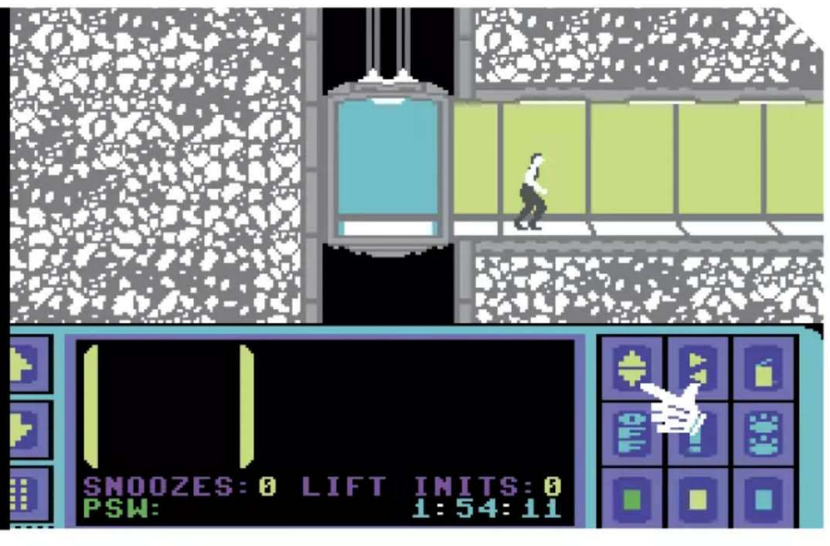
For many fans, the best moment of *Impossible Mission* was Elvin's unsettling audio welcome at the start of the game. "Another visitor. Stay a while… staaaay forever!" the wanton Professor cackled as the player began their mission. Arguably one of the most memorable bits of digitised speech to appear in a C64 game, it served as a chilling and telling greeting to the mission, and also filled the player with a sense that Atombender's foreboding underground lair has been a mausoleum for a number of spies in the past – quite possibly 4,124 of them, in fact.

IMPOSSIBLE MISSION

Impossible by name…

Owing to the random generation characteristic of *Impossible Mission*, the droid types, rooms and password pieces would be scattered around Atombender's lair during the loading process, completing the game could either be relatively easy or nigh on impossible depending on what sort of mood luck was in that day. However, the Atari 7800 NTSC version did come with a nasty glitch that rendered its account of the mission sometimes impossible. This version was notorious in that it would generate the puzzle pieces beneath the computer terminals, which made them irretrievable.

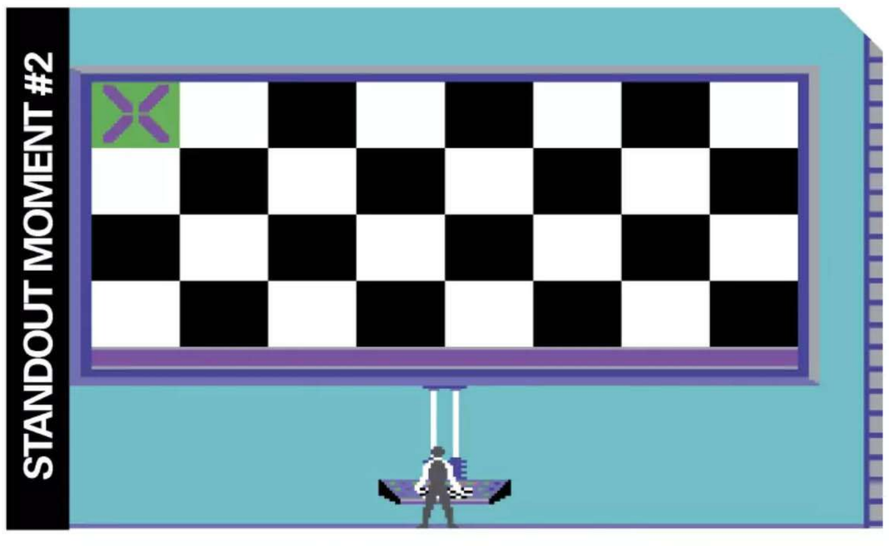
NAME'S 4125, AGENT 4125…



The sociable secret agent

Unlike most secret agents, 4125 doesn't appear to have been given a licence to kill. In fact, he doesn't even have a licence to harass. The passive hero must infiltrate Atombender's base, and save the free world relying solely on his hacking skills, somersaults and his pocket computer. At the time of *Impossible Mission*'s release, the 4125 sprite stood out thanks to his dashing good looks and the smooth and realistic way he animated. Consequently, he fast became a popular element of *Impossible Mission* and was later reused in the game's direct sequel.

STANDOUT MOMENT #2



A brief musical interlude… twice

During its construction, Elvin ordered the builders to install two code rooms in his base, which seem to be there for no reason other than to earn agents further 'snooze or 'init' passwords. We won't grumble, though. Kind of resembling the set of *Catchphrase*, upon entering these rooms the player has to listen to a brief musical composition of flashing squares, and, using a glove cursor, had to then replay the notes back in ascending order to win a code. You can replay this mini-game as many times as you like, although the tunes do get increasingly more difficult to follow.

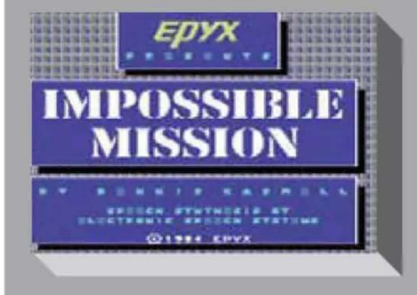
What the press said… ages ago

Zzap!64

You're looking at one of the greatest programs ever written. The graphics, animation, sound, speech and gameplay combine perfectly to create a fabulous atmosphere.

What we think

It might be one of the C64's earliest titles, but some 26 years on *Impossible Mission* still manages to impress and feel fresh. As *Zzap!64* rightly said, it's a visual and audio treat wrapped around some great everlasting gameplay.



IN THE KNOW

- **PUBLISHER:** US GOLD / EPYX
- **DEVELOPER:** EPYX
- **RELEASED:** 1984
- **GENRE:** PLATFORM
- **EXPECT TO PAY:** A FEW QUID

THE MAKING OF...
WIZBALL

Widely regarded as one of the very finest Commodore 64 games of all time, Wizball effortlessly combines frenetic shoot-'em-up action with, erm, colouring-in. Jon Hare and Martin Galway talk to Craig Grannell about the genesis of Sensible Software's psychedelic blaster

Artwork by Bob Wakelin. Scanned by Mat Allen and Rob de Voogd.

» As if later levels weren't hard enough, even the paint drops have it in for you, spraying bullets everywhere.

Labelling *Wizball* a horizontally scrolling shoot-'em-up is like dismissing *The Godfather* as a gangster flick. Sure, Sensible Software's classic C64 effort has waves of enemies, power-ups and plenty of frenetic blasting action, but it goes above and beyond its contemporaries in so many ways. Taking control of Wiz, a wizard who has a bizarre penchant for travelling around in a green ball, you're tasked with bringing the colour stolen by the evil Zark back to the previously vibrant Wizworld. Rather than collecting components required to complete levels in a conventional manner, you shoot paint-blob enemies (who eventually gain a survival instinct, rather unhelpfully firing back on later levels), and use 'Catelite' (Wiz's pet cat, Nifta, encased in a flying green orb) to collect the paint drops. These are mixed in the Wizlab and applied to the current level. Three colours are required to complete each of the eight levels, and progress is punctuated by 'filth raids' (psychotic flying 'police' aliens that spew bullets) and frantic bonus rounds.

With so many ideas shoe-horned into the game, it's not surprising that *Wizball*'s development ethos was very different to that used for contemporary games. "*Wizball* was put together in a very organic way," explains Jon Hare. "It started as a *Nemesis*-inspired shooter – hence some of the enemy waves – and a bouncing control method that Chris [Yates] was playing with." From there, the concept grew, incorporating the game's most obvious differentiator: colouring the levels. "This seemed like a neat idea, and a good mechanic for level progression, along with giving us something novel for enemies to drop when destroyed," says Jon. However, the paint collecting initially worked very differently. "In the early stages, *Wizball* had underground caves – something later used in *Wizkid* – where the Wizball grew a body and went exploring for coloured drops to fill the landscape in," remembers Jon. Memory restrictions led to the now-familiar paint-blob aliens and the introduction of Catelite as a means of collecting the drops. "Catelite was a nice control idea – probably Chris's – and the cat character was based on Chris's cat Nifta, who was always around when we were making games," remembers Jon. "Once the cat was there, he became the obvious paint collector, with the paint drops becoming similar in concept to humans in *Defender* or babies in *Insects In Space*. As Chris and I had been playing co-op *Dropzone* a lot at the time, we decided to add a co-op two-player mode, enabling one player to control Catelite. It fitted together neatly, like most good design ideas do!"

Rather than paint-blob aliens being randomly distributed throughout the current level, Sensi decided to further break from tradition, providing players

» Back in the lab, Wiz readies a colour to apply to the current level, while his trusty cat laps up a saucer of milk.

» Even on lowly level two, plenty of Zark's minions are out to destroy your exterior design plans.

» The Wizball bounces around, but control can be gained by collecting two pearls and doing some swift waggling.

» Frenetic blasting action in *Wizball*'s meteor-strewn bonus round, which offers the chance to bag an extra life.

» As a one-player game, you have to balance Wiz's survival with the need to grab falling paint drops with Catelite.

IN THE KNOW

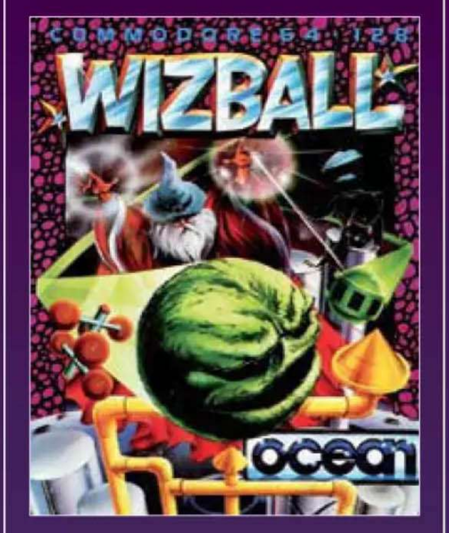
» **PUBLISHER:** OCEAN SOFTWARE

» **DEVELOPER:** SENSIBLE SOFTWARE

» **RELEASED:** 1987

» **GENRE:** SHOOT-'EM-UP

» **EXPECT TO PAY:** A FEW QUID



DEVELOPED BY

S.E.U.C.K.
SYSTEMS: C64
YEAR: 1987

SENSIBLE SOCCER
(PICTURED)
SYSTEMS: AMIGA, ATARI ST
YEAR: 1992

CANNON FODDER
SYSTEMS: AMIGA, ATARI ST
YEAR: 1993

THE MAKING OF...
WIZBALL

BOUNCY (WIZ) BALLS

Although enjoyed by the majority of those who've experienced it, *Wizball* has left a sour taste in the mouths of some gamers – mostly those who can't get to grips with its control method. Initially, the Wizball bounces around the landscape and off of objects, but as the handy 'Wiztips' screen shows, two of the earliest power-ups available are 'thrust' (which provides 'in-flight' control) and 'anti-grav' (which provides full, standard eight-way control over the Wizball). On lower levels, eight of the aliens that always leave pearls behind when shot are immediately available, making it pretty easy to get anti-grav working, although if you've no permanent power-ups on later levels, a bouncing Wizball spells almost certain doom.

"We thought the bouncing emphasised the uniqueness of the game," explains Jon. "Also, it was a good point to drop you back to, to penalise you for poor play!"

» Catelite makes a beeline for a grey paint drop, which will make him 'indescructacat'.

with three 'active' levels, accessible via a network of 'up' and 'down' entrances.

"This came from a definite desire to break up the standard level flow, but it also aided the RGB colouring-in factor – we needed to ensure there was always an available level dominated by red blobs, one by green and another by blue," explains Jon. Therefore, completing the lowest active level rendered it inactive – empty of all enemies – but unlocked the next higher level, with tougher enemies and trickier-to-navigate landscapes.

These ideas provided layers of strategy. Along with trying to keep Wiz alive – one hit from a bullet or enemy causes the Wizball to explode in a shower of shards – you have to look out for and protect Catelite. Without the ever-faithful cat (who is rather more durable than Wiz, expiring after losing nine lives), paint-collection – and therefore, progress – isn't possible, but if Wiz's lives are all lost, the game is over. *Wizball* is a juggling act – a mix of blasting, quick

» Wiz mercilessly slaughters some helpless hoops, thinking how great it would be if none of Zark's minions could fight back.

dives with Catelite to grab falling paint drops, and regular retreats from hoards of hostile enemies. Later levels require regular trips between active levels, as the colours require elaborate mixing, and over-cautious players are hampered by the aforementioned filth-raids, should an enemy not be dispatched for a period of time. Additionally, players must be eagle-eyed when grabbing paint drops, because five non-standard colours randomly appear. Two are 'friendly': a white drop provides the player with a bonus Wizball and a grey drop increases the cat's number of lives. However, three unfriendly colours lurk: purple drops make the cat crazy, sending it zipping around the screen, until it expires from damage; a light-blue drop causes a major filth raid, with multiple 'police' ships; and a black drop makes the landscape invisible. "The filth-raid and mad cat are classic Sensi touches from the old days when fun was allowed, without it having to be built into a milestone schedule!"

Usefully, respite of a sort is provided in *Wizball*'s bonus rounds, which offer a chance to grab an extra life (if you survive long enough), and the tranquil surroundings of the Wizcave (where you select a permanent power-up, and watch Wiz mix the current colour while Nifta gulps down a saucer of milk). But were these strategic elements in any way planned, or was it all a happy accident?

"All our games were made in the same way: create some great game mechanics, good AI and a decent level structure, and the gameplay looks after itself," claims Jon. "By offering the player a flexible strategy in a structured progression format, it is naturally occurring that the player experiences both freedom and a sense of direction – thus, they can create

"WIZBALL WAS PUT TOGETHER IN A VERY ORGANIC WAY, AND NOT REALLY PLANNED IN THE WAY MODERN GAMES ARE"

JON HARE

» Enemies close in as Wiz aims to get enough paint to add the third colour to the final level.

» Wiz ponders for a moment his decision to use brown as the base layer for this glass-oriented level.

> "FOR THE 'GAME OVER' TUNE, WE ALL SIMULTANEOUSLY AGREED THAT AN OUTRAGEOUS 'F*CK YOU!' GUITAR LICK WOULD SUFFICE; IT'S A POKE-IN-THE-EYE, BREAKING THE FICTIONAL MOOD, SINCE YOU'RE PULLED OUT OF YOUR GAME EXPERIENCE" MARTIN GALWAY

their own gameplay and feel it was all some pre-designed strategy!"

Wizball isn't considered a classic just because of its gameplay – it's one of the prettiest games on the C64. But was Wiz always envisaged as a wizard in a grinning green ball? "The ball came first… the wizard was a storyline tagged on near the end," admits Jon. "At Sensi, we'd often create a world and justify it with a dubious storyline!" In hindsight, Jon considers the main character graphics purely functional in design, but remains fond of his work elsewhere: "As an artist, I'm proudest of the backgrounds. My favourite level is the final level, which was the first time I attempted to draw glass on a computer. Mount Rushmore was a 'running out of ideas' moment…"

And then there's sound effects and music, crafted by the talented Martin Galway. Jon notes that "although we gave Martin ideas of what was intended to be conveyed, we just let him get on with it," adding that "I have a feeling Martin played the games as well, which gave him a better feel for the effects!"

Martin remembers becoming involved with the project because Sensi's agreement with Ocean was that they weren't set up to provide music. "Ironic, since Jon and Chris were accomplished musicians capable of working on that aspect of the game," says Martin. "But since Ocean had me in-house and I'd already wowed them with *Parallax*, there was a natural fit."

Freed from the constraints of Ocean's movie and coin-op tie-ins, Martin felt free to experiment, and worked alongside Chris and Jon when some of *Wizball*'s music was composed. "For the simpler tunes, I owe a great deal to the guitar-playing of Chris and Jon. For the 'game over' tune, we agreed that an outrageous 'f*ck you!' guitar lick would suffice. The game itself had a trippy feel to it, which we wanted to continue in the music, but for the game-over tune, we wanted a poke-in-the-eye, breaking the fictional mood, since you're pulled out of your game experience." Chris duly obliged, picking up his electric guitar and playing a perfect rendition of the tune. "When they came back, I'd recreated his tune inside the C64, making it more massive-sounding than the plain guitar version, and the lads loved it," says Martin.

The bass-line tunes were done in similar fashion, in collaboration with Jon, who provided loops and riffs, but the title-screen music was Martin's. Martin reckons that it's influenced by the Vangelis album *China*, although he's never owned a copy: "I'm not saying I ripped it off – just that I had flavours of that album in my mind as I composed *Wizball*'s title-screen tune. I guess the process was rather like trying to cook a meal you've eaten, but having to guess at the ingredients – it comes out different, but has some similarities."

SID fans will be aware of the shift in tone half-way through the track, which Martin says was down to completing the first part of the tune, doing the rest of the work on the project, and then returning to Ocean's Manchester office to quickly completing the title track before becoming embroiled in other games. "I contemplated the mysterious process of creating magic potions that the wizard would go through, and that gave me the basis for the second part of the composition," explains Martin. "The first part evokes the wondrous, magical land that the game takes place in."

Looking back, Martin reckons the music holds up pretty well: "I should have perhaps paid more attention to the end of the title-screen tune, and tried to extend it while keeping the same style. But otherwise I think it's probably the audiovisual pinnacle of my C64 days; there's not much that comes near it."

Despite the unconventional nature of the game, critical acclaim arrived in droves, but this didn't surprise Jon, who considers *Wizball* "one of the most 'complete' games we ever produced". Commodore User awarded *Wizball* a Screen Star, and only the grumpiness of Gary Penn denied the game a Zzap!64 Gold Medal. "*Wizball*'s greatest accolade was a 'game of the decade' award from Zzap!, which made up for the lack of a Gold Medal, and also ranks as one of my greatest achievements in gaming," says Jon, who considers *Wizball* one of three 'classic' games he's worked on. "The other two are *Sensible Soccer* and *Cannon Fodder*. I've worked on other great games, but not in the same league!"

SON OF WIZ

Wizball gained a 16-bit-only sequel in the early Nineties – the utterly bonkers *Wizkid*. "The idea of the Wizball gaining a body and walking around was something I'd originally planned for the 8-bit original, but we didn't have enough memory," recalls Jon, who's also adamant that *Wizkid* is a true sequel, rather than a mere spin-off: "The characters are the same – as is the spirit of the game". One major change, however, is the game's inspiration, as Jon explains: "We decided to base the game on *Arkanoid* instead of *Nemesis* and *Defender*, and see what transpired… The crosswords and kittens and stuff just fell out of our heads like unwanted children and ended up in the game. Had we put out *Sex 'n' Drugs 'n' Rock 'n' Roll*, I believe that would have been a further sequel, with the same anarchic and humorous spirit found in *Wizball* and *Wizkid*."

» What Mount Rushmore is doing on this alien world is anyone's guess, but Wiz will be splattered all over it if he doesn't deal with the incoming enemies.

» After Catelite grabs a light-blue paint drop, the fuzz arrive, dispensing their brand of justice on an unfortunate Wiz.

» 'Wot a Wizace!' exclaims the game, treating you to a flypast of each level once all three colours have been applied.

» Harrowing screams meet you on the game-complete screen, with the colour wrenched from the world again.

TOP 25 COMMODORE 64 GAMES OF ALL TIME

You would need a seperate book in order to list every single fantastic game that was released for Commodore's classic 8-bit home computer. As that's not really possible, we've decided to do the next best thing, by highlighting 25 firm fan favourites. How many of the following popular games have you played?

Stunt Car Racer

- **Year:** 1989
- **Publisher:** MicroStyle

25 **It's a testament to Geoff Crammond's skill as a coder that two of his three C64 games made your list.** *Stunt Car Racer* managed to combine Geoff's love of physics with the thrills and spills of the arcade racers that were popular at the time.

Yes, it's not as good as the Amiga version, but in many ways *Stunt Car Racer* remains an astonishing achievement on the C64 thanks to its slick engine, carefully crafted track design and wonderfully tight controls.

Even today, *Stunt Car Racer* is fun to play, largely because of the aforementioned physics and intricate track design, which have really stood the test of time. You're required to learn every inch of the track in order to master it, but the sense of achievement you receive when you do is unmatched.

The Sentinel

- **Year:** 1986
- **Publisher:** Firebird

24 **Although best known for his racing games, Geoff Crammond wasn't afraid to step out of his comfort zone in order to deliver genuinely engaging experiences.**

The Sentinel is arguably one of his most surreal and imaginative games, offering a cerebral challenge that few other titles on the C64 can match. Indeed, from the moment you witness Bob Stevenson's iconic loading screen, you know you're about to play something special.

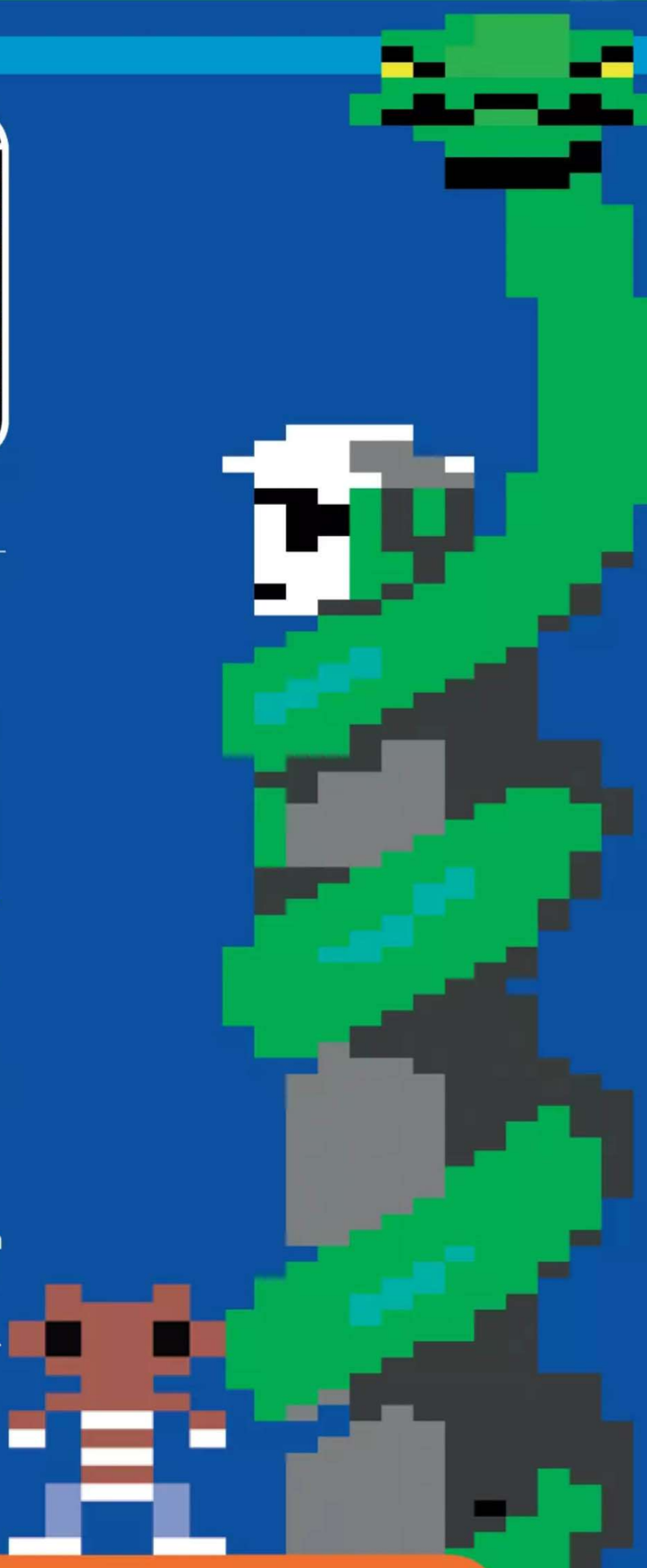
Using the absorbing skills of your Synthoid, you must reach the highest point of each of the 10,000 levels and absorb the titular Sentinel without it spotting you. Interestingly, the slow drawing process of the C64 version – compared to its 16-bit counterparts – actually added to the game, creating an unbearable tension that, in turn, made it utterly unique. It was simply masterful, and highly challenging.

Boulder Dash

- **Year:** 1984
- **Publisher:** First Star Software

23 **First released on Atari's 8-bit range of computers, *Boulder Dash* would go on to have massive success across a staggering range of home computers and consoles.** The C64 version was no different, and it remains one of the best puzzle games on the system, thanks to the super-cute hero Rockford – who became so popular that he infiltrated the pages of *Zzap!64* – as well as the deviously designed mazes that developer Peter Liepa created.

While it shared many similarities with Taito's obscure arcade game, *The Pit*, Liepa's *Boulder Dash* nevertheless stood proudly on its own two feet. It enhanced Taito's formulae by introducing all manner of new gameplay mechanics: the huge, multi-scrolling stages filled with precious diamonds for Rockford to collect, and deadly hazards for him to avoid. It's a timeless classic.



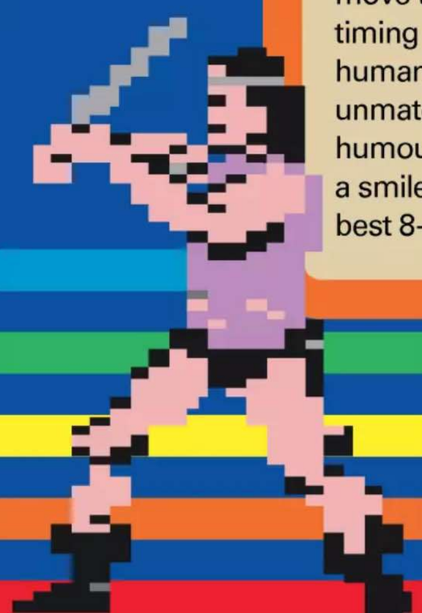
"Super-cute hero Rockford became so popular that he infiltrated the pages of Zzap!64 magazine"

Barbarian: The Ultimate Warrior

- **Year:** 1987
- **Publisher:** Palace Software

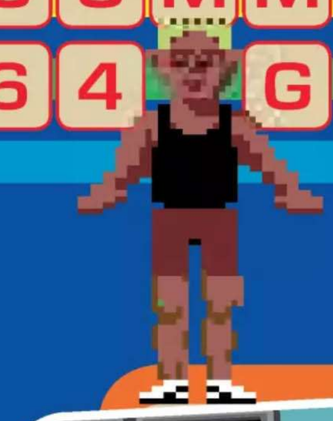
22 **Even without that infamous cover, starring a scantily-clad page three model, *Barbarian: The Ultimate Warrior* was always going to be a rip-roaring success.** Heavily inspired by Frank Frazetta's stunning fantasy art and *Conan The Barbarian*, Palace Software dreamt up a beautifully brutal fighter that, in addition to still playing brilliantly, also managed to offer a sense of danger that, even now, can't be beaten.

We are of course talking about the infamous decapitation move that would immediately end a battle should you get the timing right. While tough to pull off against later computer, or human, opponents, the sense of satisfaction it offered remains unmatched. Steeped in atmosphere and with a rich sense of black humour – the goblin booting a head off screen never fails to raise a smile – *Barbarian* remains an excellent fighter and one of the best 8-bit brawlers on any system.



TOP 25

COMMODORE 64 GAMES OF ALL TIME



California Games

- **Year:** 1987
- **Publisher:** Epyx

21 **Epyx released a number of classic sports games for the C64, but this sterling effort from 1987 is the one you all appear to love the most.** Although it didn't offer as many events as its predecessor, *World Games*, *California Games* nevertheless managed to impress gamers thanks to its excellent animation, super presentation and the sheer variety found in the six included events: which ranged from half-pipe and roller skating to surfing, footbag and frisbee throwing.

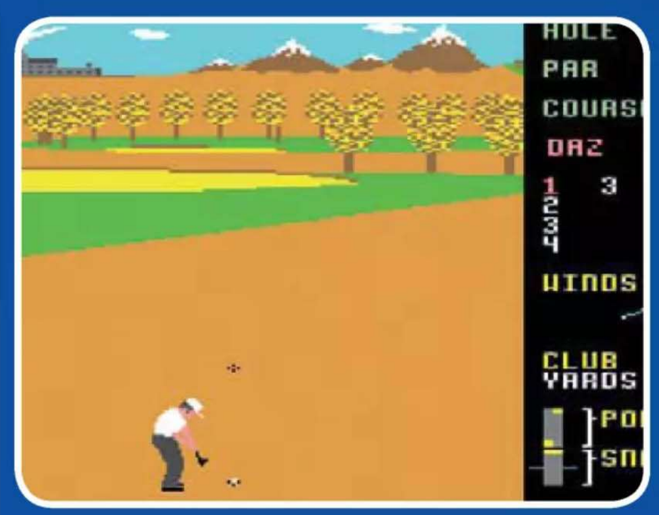
As with past games in the series, accessibility and easy to follow instructions were the key to *California Games*' success, with each event being easy to learn, but difficult to master. Learn it you would, though, if only so you could completely hammer (up to seven) friends' attempts on each event. As bright and breezy as the state it was based on.

Leaderboard

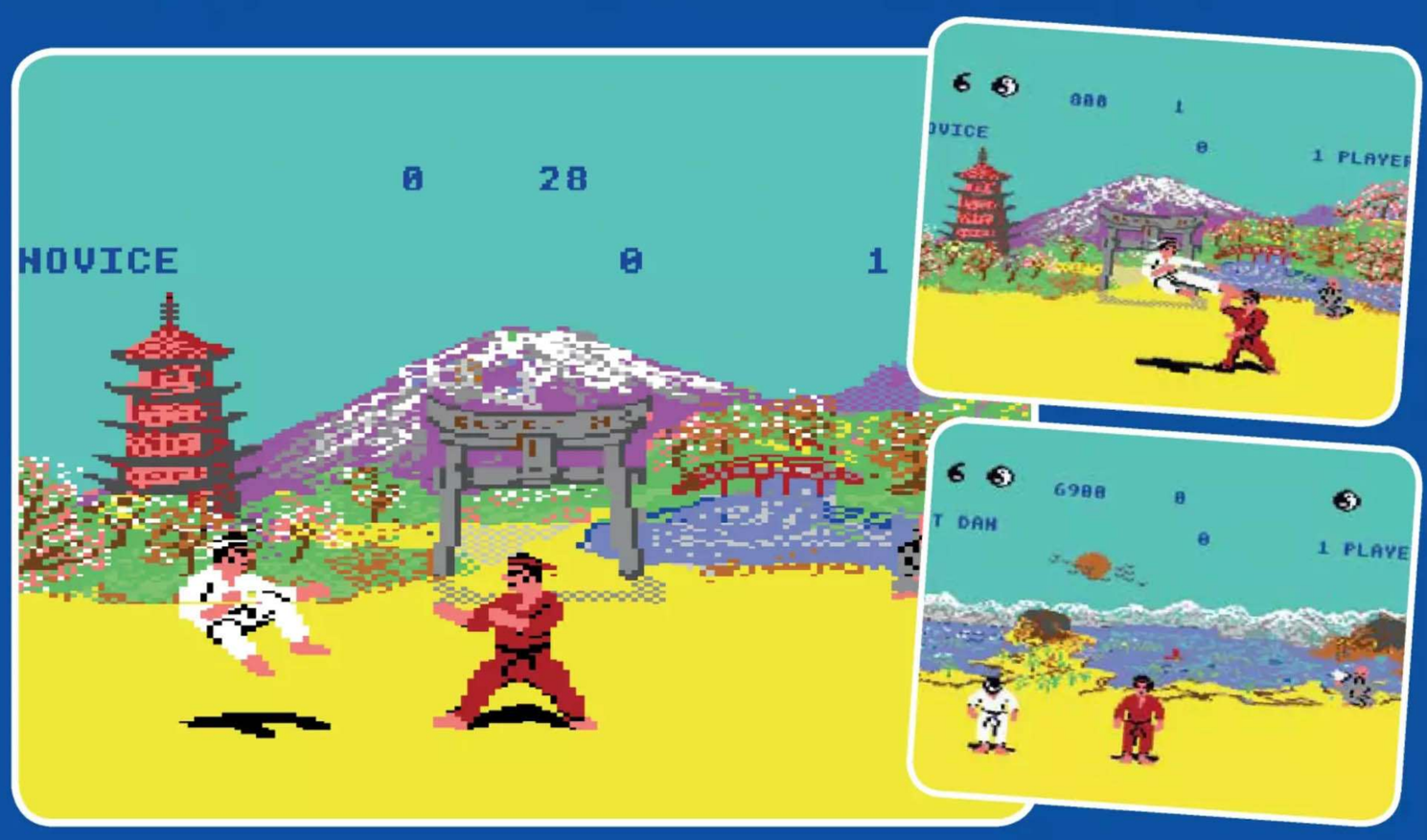
- **Year:** 1986
- **Publisher:** Access Software

20 **With many in the gaming world now obsessed with the yearly antics of Tiger Woods and the PGA, it's easy to forget that it all started with Access Software's sublime *Leaderboard*.** Now, admittedly it wasn't the first ever golf game to appear on a home micro, but it's hard to remember a version that was this comprehensive and accessible.

Leaderboard had everything you'd expect from a cutting-edge golf game. There were four exceptionally detailed courses to choose from, three modes: Novice, Amateur and Professional, and 14 distinct types of clubs, making it an amazingly comprehensive package. By far the best aspect of *Leaderboard*, though, was its excellent control mechanics, which gave you a previously unseen amount of control when striking the ball.



It's long been surpassed by other golf games, with the developers going on to create the excellent *World Class Leaderboard*, but the original still remains the perfect example of a title that transcends its typical audience to appeal to an even larger group of people.



The Way Of The Exploding Fist

- **Year:** 1985
- **Publisher:** Melbourne House

19 **From the moment you first laid eyes on *Fist*, it was obvious where its inspiration had come from. It was clear to reviewers as well, many of who proclaimed it to be the best version of *Karate Champ* they'd ever played, despite the fact that it was a standalone effort.**

Yes, there were obviously similarities between both *Fist* and *Karate Champ*, but we'd argue that Beam Software's effort was the better game. For starters, it looked fantastic, with super-slick animation that gave the on-screen combatants plenty of life. While it was unable to match the impressive number of moves found in *Karate Champ*, it still featured a decent repertoire, all of which you would have to master if you wanted to reach the later stages and achieve the revered tenth Dan rank.

The Way Of The Exploding Fist was the first home computer fighting game to genuinely feel as slick as its arcade counterparts, and remains a fun, tactical little fighter.

Myth: History In The Making

- **Year:** 1989
- **Publisher:** System 3

18

System 3 could seemingly do no wrong on the C64, with its 12 reviewed games in *Zzap64!* receiving an average score of 90 per cent. Of course, when you consider games like *Myth*, those high scores begin to make sense.

Myth: History In The Making was a truly epic adventure that eschewed the distinct isometric approach of System 3's games for a more traditional side-on scroller that saw its hero battling all manner of mythological creatures as he travelled through time.

Initially armed with just his fist and feet, the unnamed hero was able to gain access to a variety of different weapons as his adventure progressed. Weapons were needed as well, as *Myth* could be tough in places, requiring deft reflexes to survive. You'd battle on, though, as Peter Baron and Bob Stevenson had created a truly stunning game, with huge multi-load levels that perfectly captured the mythology that it was inspired by.

Delta

- **Year:** 1987
- **Publisher:** Thalamus Ltd

17

When it came to shoot-'em-ups the C64 was untouchable. Thanks to its super fast scrolling, it was able to recreate an arcade-like experience that its 8-bit peers often struggled to match, and as a result, it had many great exclusives.

One such example was Thalamus's *Delta*, an impossibly slick horizontal-scrolling shooter that boasted highly stylised graphics, challenging attack patterns and ridiculously huge bosses. Fuelled by a suitably manic score from Rob Hubbard (there was even a sound mixer for creating your own tune while the game loaded) *Delta* featured a fun power-up system where you collected credits to boost various aspects of your ship, a nice take on the mechanics that were popular at the time.

It suffers now from relying a little too much on memorising attack patterns, and ensuring you have the right weapons for the right areas, but this is a fault that can also be levelled at Konami's *Gradius* (which *Delta* is very similar to).

"Thanks to its super fast scrolling, the C64 could recreate an arcade-like experience"

Maniac Mansion

- **Year:** 1987
- **Publisher:** LucasFilm Games

16

If you read our exhaustive 'Making Of' in issue 94 of Retro Gamer, you'll know just why LucasFilm's superb game made this list. If you didn't, then allow us to illuminate you. Created using the now legendary SCUMM engine, *Maniac Mansion* saw three kids exploring the titular house in search of a missing cheerleader called Sandy – discovering a bunch of wacky protagonists and devious puzzles on the way.

Creators Ron Gilbert and Gary Winnick were given free rein over *Mansion*'s creation, and it can be seen in every nook and cranny of the huge house you have to explore. Characters are memorable and spout genuinely amusing zingers, the puzzles are extremely well thought out, while the intelligent cursor makes it incredibly easy to manipulate your surroundings and interact with the objects and characters. A genuinely entertaining adventure that needs revisiting.

TOP 25

COMMODORE 64 GAMES

OF ALL TIME

Last Ninja 2

- **Year:** 1988
- **Publisher:** System 3

15 **There was more to *The Last Ninja*'s hit sequel than just a change of scenery and location, much more.** For starters, it was a massive graphical improvement over the already impressive original, with detailed locations from John Twiddy that perfectly captured the atmosphere of New York. Technically impressive, skyscrapers soared ever upwards, levels were packed with detail and the Last Ninja and his counterparts featured far better animation than their critically acclaimed predecessor. Add in an extremely atmospheric soundtrack from Matt Gray and System 3's sequel was an aesthetic delight.

But there was more to *Last Ninja 2* than just pretty visuals; its gameplay had improved significantly to its predecessor as well. The vast majority of *Last Ninja 2*'s gameplay still revolved around you seeking out specific items that would give you access to the next beautifully detailed area, but the puzzles were far cleverer than they were in *The Last Ninja*. Combat and jumping were also greatly improved as well, not requiring the pixel-perfect timing that plagued the original game. It still suffers from the clunky controls of the original, and many preferred the oriental setting of part one, but System 3's sequel remains a shining example of subtly improving on an already great concept.

Buggy Boy

- **Year:** 1987
- **Publisher:** Elite

14 **Considering how popular arcade conversions were on the 8-bit systems, only two conversions have actually made your list.** The first is Elite's port of Tatsumi's *Buggy Boy*. The second… Well you'll find out in a couple of pages.

What's interesting about *Buggy Boy* is that while it struggles to capture the bright and breezy cartoon visuals of the original arcade game, it nails the actual gameplay, delivering a conversion that *feels* like Tatsumi's popular racer, even if it isn't identical. Perhaps realising that the C64 was never going to accurately recreate the thrills and spills of Tatsumi's racer, Elite instead tried to make the best possible racer that it could – the end results were impressive to say the least.

Dave Thomas' slick coding allowed for some brilliantly precise handling that made controlling your buggy a lot of fun. The scrolling was extremely smooth as well, and it ran at a great speed, delivering an excellent off-road racing experience that few other games could match. It may have only boasted five courses, but the finely honed gameplay kept you going back for more.

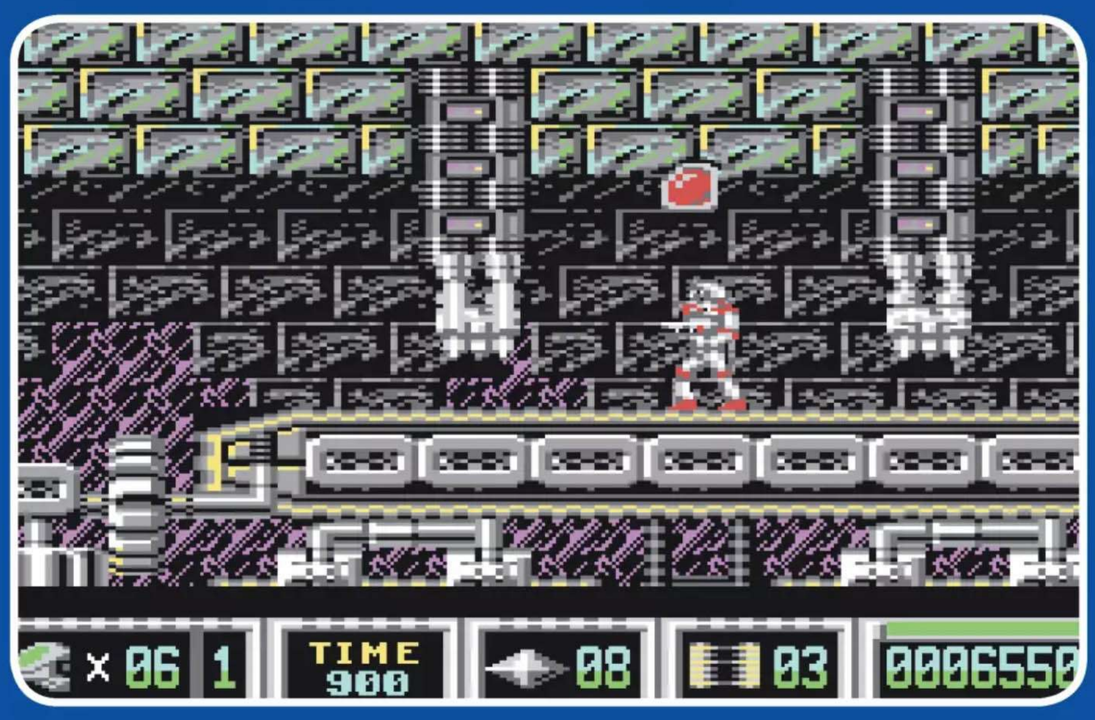
"Trenz delivered a stunning masterpiece that effortlessly improved on his original game and made the jaws of non-C64 owners drop to the floor"

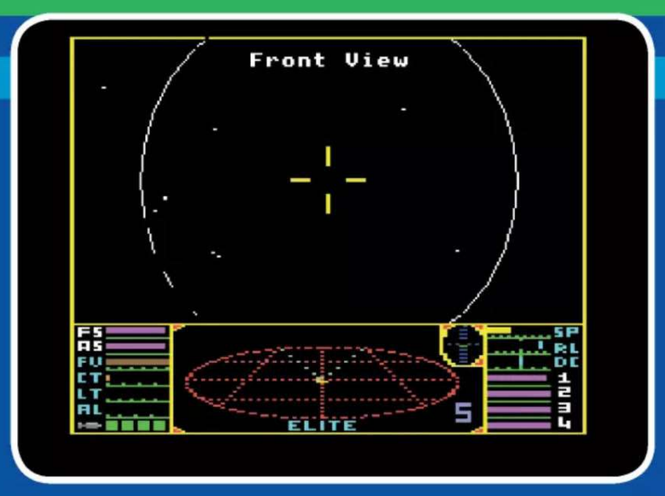
Turrican II: The Final Fight

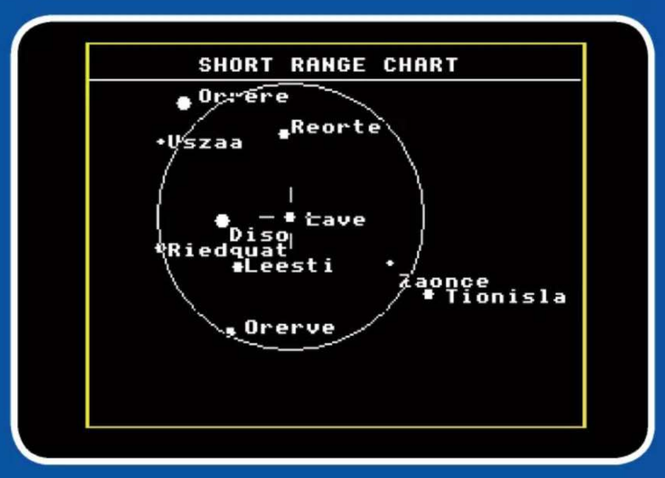
- **Year:** 1991
- **Publisher:** Rainbow Arts

13 ***Turrican* was an amazing C64 game that made developer Manfred Trenz a household name.** A sequel was inevitable as night following day, but how do you improve on such a killer formulae? If you're Manfred Trenz, you make everything bigger, bolder and better than before and included another storming score from Chris Hülsbeck. Oh, and you add an excellent shoot-'em-up level into the mix as well.

Turrican II is trashy, excessive, over-the-top, but most of all is fun. After honing his coding skills on the likes of *Denaris*, *Katakis* and the original *Turrican*, Trenz delivered a stunning masterpiece that effortlessly improved on his original game and made the jaws of non-C64 owners drop to the floor. Filled with the sort of kinetic action that was readily available in the arcade games that Manfred so loved, and featuring some truly mind-blowing enemies (the final boss towers three screens high) *Turrican II: The Final Fight* was a technically accomplished videogame that had great gameplay to back up its stupendous visuals. A perfect sequel that improves on the original in every possible way.







Elite

- **Year:** 1985
- **Publisher:** Firebird

12 **We were somewhat surprised to see *Elite* just outside the top ten, as the C64 version is widely regarded as one of the best iterations of the game.** Surprise aside, it's still easy to see why *Elite* charted so highly, because it remains a phenomenal achievement, squeezing an amazing universe of possibilities into just 32k.

The C64 version arrived some eight months after the original BBC version, but made up for its tardiness with additional 'special missions', the inclusion of Trumbles (a homage to *Star Trek*'s Tribbles), and a rendition of The Blue Danube Waltz, which plays whenever you dock. Bugs had also been eradicated, giving C64 owners a more solid version that was only really let down by its slower running speed.

Fortunately, *Elite*'s focus on exploration meant that the slower pace wasn't an issue and it went on to be spoken of in the same revered tones as its BBC predecessor. A true classic that paved the way for future flight simulators and open-world games.

The Last Ninja

- **Year:** 1987
- **Publisher:** System 3

11 **We're guessing that nostalgia, rather than common sense, is the main reason *The Last Ninja* sits higher than its superior sequel.** Having said that, it's still an expertly crafted adventure and it's a testament to developer John Twiddy that no other game featured in your list along with its sequel.

The multi-load adventure was set across six distinct areas and saw the titular ninja, Armakuni, trying to defeat the evil shogun, Kunitoki. As with its sequel, *The Last Ninja* featured a healthy mix of exploration and combat, but was let down by some truly obscure puzzles and tricky jumping sections that still have us wailing with frustration whenever we attempt them.

And yet John's game still does a lot right, thanks to its incredibly atmospheric levels, gorgeous design and an incredibly slick engine, which in many ways feels like the sort of 3D world that Ultimate created for the humble Spectrum. Even with its many niggles, there's no denying the appeal of System 3's game and it's little surprise that it remains to be held in such high esteem. What a pity that we're never likely to see Armakuni go on any future adventures.

Kik Start II

- **Year:** 1987
- **Publisher:** Mastertronic

10 ***Kik Start* was a huge success for Mastertronic, proving that a £1.99 game was just as good (and sometimes better) as a full-priced release.** Shaun Southern's sequel blew the already excellent original out of the water, delivering far better visuals, more courses, and best of all, an utterly superb level editor.

Gameplay-wise *Kik Start*'s sequel is very similar to the original, with you (and another player in the excellent verses mode) racing across five chosen courses as quickly as possible. This time, though, the controls had been greatly refined, allowing for far better precision, which made it a lot easier to judge the speed to tackle certain hazards at. Yes, it can be annoyingly fiddly, but the sense of satisfaction you receive on a flawless run is immense.

And let's not forget *Kik Start II*'s sprawling level editor. Sure, it takes a little while to get to grips with it, but once mastered you increase *Kik Start II*'s appeal tenfold. 24 courses was already a massive improvement on the eight found in *Kik Start*, but Shaun's comprehensive level editor meant it would last as long as your imagination did.

TOP 25

COMMODORE 64 GAMES

OF ALL TIME

Bruce Lee

■ **Year:** 1984

■ **Publisher:** US Gold

9

A Bruce Lee game about collecting lanterns sounds like a recipe for disaster, but the reality couldn't be further from the truth.

Bruce Lee, like *Boulder Dash*, started off life on the Atari 8-bits, before moving over to other systems. It's an interesting hodgepodge of genres, successfully combining – admittedly limited – fighting moves with fluid, fast-paced platforming. It works well, with Bruce having to rush around each stage collecting lanterns in order to reach the next area. Spanners are thrown in the works with the inclusion of a lithe ninja, and the Green Yamo, who continually chases Bruce around the beautiful levels.

One of the best aspects of *Bruce Lee*, which still holds true to this day, is the way you can approach each stage. Do you simply pummel your way to victory or rely on simple speed? Either way, the end result is a masterful hybrid that's still resounding fun to play.

> "It was never going to win awards for its minimalist visuals, but it delivered an authentic world"

Thrust

■ **Year:** 1986

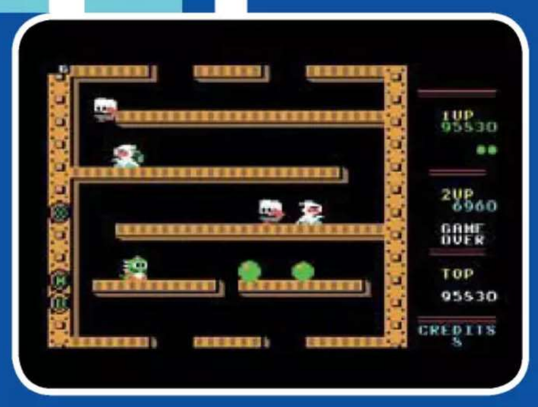
■ **Publisher:** Firebird

8

Like many hit 8-bit games, Firebird's *Thrust* owes its creation to a classic arcade game – in this case, *Gravitar*. In many ways, though, Jeremy Smith's offering is a far better videogame, subtly taking elements from the arcade original template, but stamping its own ideas all over it.

Thrust was never going to win awards for its minimalist visuals, with many gamers and reviewers calling it dated on its release, but Jeremy's focus wasn't on cutting-edge graphics, it was on delivering an authentic world for your spacecraft to explore – a task he achieved easily.

Thrust required you to do little more than explore the alien terrain and recover a set-number of fuel pods. The snag here, however, was that you had to get used to both *Thrust*'s realistic physics and deviously placed enemy ships. Part puzzle, part shooter, *Thrust* required you to be quick on your trigger finger while mastering your ship's delicate control system. It's a beautiful marriage of mechanics that still stands the test of time.



Bubble Bobble

■ **Year:** 1987

■ **Publisher:** Firebird

7

24 years after its original release and we still can't believe that Ste Ruddy was able to cram Taito's hit coin-op into the C64. Even after he revealed all in issue 95, it remains a phenomenal achievement, even if it isn't quite as arcade perfect as many made it out to be at the time.

In 1987, though, *Bubble Bobble* on the C64 felt like a revelation. Ste Ruddy's conversions was simply astonishing, with great sprite work, authentic level design and plenty of secrets that had been tucked away in the original arcade game. He even managed to get one of the secret levels in, bless him – impressive work when you consider that Ste had no inside help at all from *Bubble Bobble*'s original creators, and had to base all his experience on his own play-throughs. Ste's stupendously good work is further complemented by a wonderfully authentic version of the unmistakable theme tune from Peter Clarke, which adds further to an already excellent conversion. *Bubble Bobble*'s sequel also received a fine conversion (from Graftgold), but it still couldn't top Ste's effort with the original game.

In short, we'd argue that *Bubble Bobble* is the best arcade conversion on Commodore's machine, and judging by the sheer number of you who voted for it, it would appear that you're in complete agreement.

Armalyte

■ **Year:** 1988
■ **Publisher:** Thalamus Ltd

6

***Armalyte* is further proof that the C64 was the computer to own if you loved shoot-'em-ups.** From its metallic-tinted visuals to its awesome boss designs, everything about *Armalyte* screams epic. Coded by Dan Philips and John Kemp, with graphic duties by Robin Levy and a punchy soundtrack from Martin Walker, *Armalyte* is a gorgeous game that calls to mind classic arcade hits such as *Nemesis* and *Salamander*.

More importantly, however, *Armalyte*'s game design is every bit as meticulously designed as its scintillating visuals. Enemies are cleverly placed, offering a stiff, but not overtly unfair, challenge, while the actual level design is superb, offering plenty of areas where pinpoint movement is just as important as shooting accuracy. Power-ups are also of a high standard, and while they're not original, they all pack a meaty punch and are extremely satisfying to use.

Armalyte may not be very innovative, but it's an expertly crafted shoot-'em-up with a timeless quality to it. The fact we still regularly play it is all the proof of its excellence that you need.

Impossible Mission

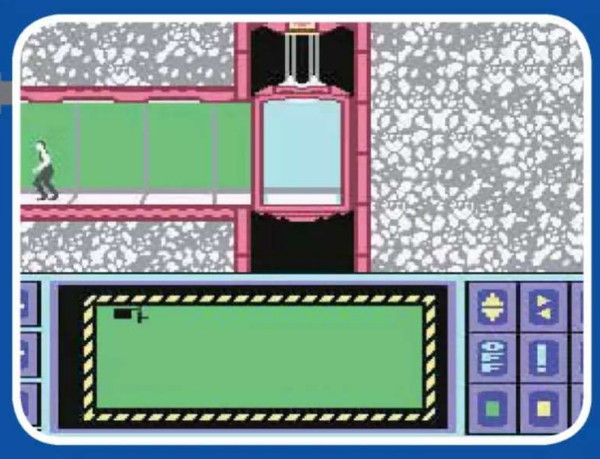
■ **Year:** 1984
■ **Publisher:** Epyx

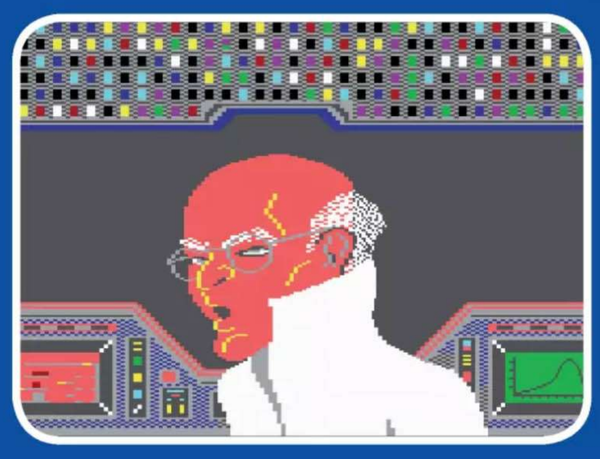
5

Even today, Elvin Atombender's infamous taunt "Another visitor. Stay a while… Staaaay forever!" sends a tingle of excitement down our spines. Created by Dennis Caswell in 1984, *Impossible Mission* was an atmospheric romp that saw Agent 4125 leaping and somersaulting his way through Elvin's labyrinth-like complex in search of missing password pieces that, when assembled, would allow the agent access to the main control room.

It's not an easy task, though, as the diabolical genius has scattered the pieces all over his lair. Worse still, vicious robots guard many of the lifts and platforms, and Agent 4125 must either athletically leap over them or deactivate them via the many computers found on each screen.

Add in a strict six-hour time limit (with every death knocking ten minutes off the clock) and *Impossible Mission* became a frantic race against time. Numerous ports and sequels followed, but Agent 4125's original adventure remains his best.





Uridium

■ **Year:** 1986
■ **Publisher:** Hewson

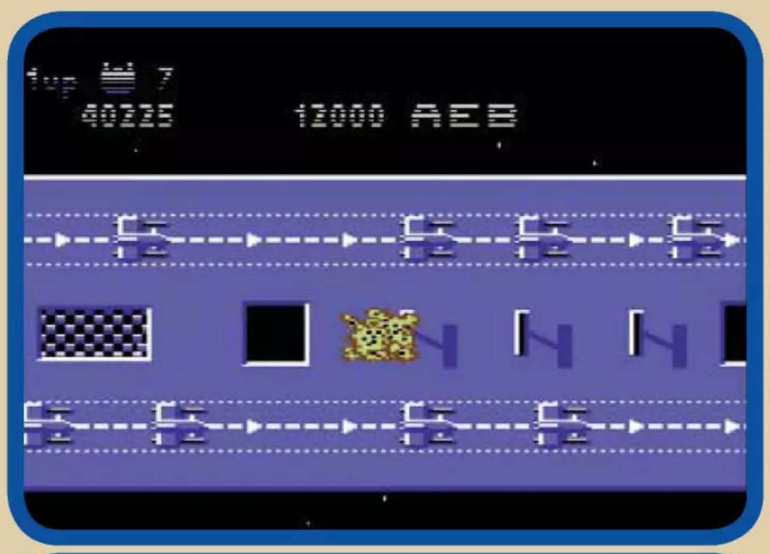
4

To many C64 owners, Andrew Braybrook is a god. A coding god, of course, but a god nonetheless. While he occasionally dabbled with other systems, his mastery of the C64's innards was legendary, and he delivered a number of super-slick games that felt just as polished as those you'd seen in arcades.

Uridium scored an astonishing 99 per cent for its graphics when it was reviewed in issue 11 of *Zzap!64*. It's a near-perfect score, but totally understandable when you witness what Andrew was making the C64 pump out. Impossibly fast, silky smooth scrolling combined with gloriously detailed Dreadnoughts and stylish-looking ship sprites to create an awesome game that still impresses today.

It was *Uridium*'s meticulously designed gameplay that most remember, though, with your Manta-class Space Fighter effortlessly gliding over the huge Dreadnoughts and taking down the hordes of opponents that constantly assaulted you. It wasn't just the Dreadnaught's fleet that caused issues, though, as the battleship itself also had to be contended with. Each of the 15 huge ships had various outcroppings on them that couldn't be destroyed, meaning you had to fly around them to avoid losing a life. It's a great mechanic that really heightened the feeling of flying over a huge ship and made for some incredibly tense bombing runs. Fortunately, your fighter was more than up to the difficult task thanks to being highly manoeuvrable and a complete joy to control. Take down the Dreadnought's many gun emplacements, land your ship – no easy task in itself – and you'd then get to repeat the process against an even tougher adversary.

Even now, some 25 years after its original release, *Uridium* remains a breathtaking shooter to play, with a timeless quality that few other C64 shoot-'em-ups can boast. It's proof to Andrew's skill as both a coder and a game designer that he's the only developer to have two games in your top five.



International Karate +

- **Year:** 1987
- **Publisher:** System 3

3

It's easy to forget the understated genius of Archer Maclean's sequel to the acclaimed *International Karate*. For the uninitiated, all he did was add a third fighter to an already great game – and that's pretty much it. The reality, of course, is that there was far more to Archer's sequel than just that additional fighter, but it's amazing how such a seemingly straightforward idea could help lift it above so many other examples of the genre. In fact, we'll go as far as to say that *IK+* is the best 8-bit fighter, full stop.

By far the most astonishing aspect of *IK+*'s third pugilist is that we've never seen the mechanic emulated elsewhere with the same dazzling effect. Sure, there are games like *Powerstone 2* that take the idea to its natural three-dimensional conclusion, but from a 2D standpoint? We just can't think of a decent example at all.

One of our favourite aspects of *IK+* is just how expressive and animated the new fighters were. Archer's sequel added stomach kicks, a dangerous head butt, and several other moves to the standard *International* roster, turning combatants into truly dangerous opponents. Archer also included an exceedingly useful backflip (inspired by watching *Grease*) that allowed fighters to get out of trouble if things became too dangerous. The frantic on-screen fisticuffs were backed up by another magnificent score by Rob Hubbard (who had also worked on the original), while even the referee had more to do in Archer's blistering sequel.

Originally assigned to the background, he now pops up during matches to report on the current scores and give encouragement to players. It's a mechanic that works surprisingly well, spurring on the player to greatness, even when he's trailing by a full point. Last, but by no means least, was a new bonus round that saw your player deflecting an increasing number of bouncing balls. As the round continued the speed and trajectory of the balls increased, requiring amazing reflexes to net the best scores.

Despite the sheer amount of action that Archer had packed into his sequel, he still wasn't satisfied, and he began tinkering with *IK+*'s once static backdrop. Fish randomly leapt from the water, spiders would dangle down from overhead beams, gulls would lazily fly across the sky; it all helped *IK+* to not only feel realistic, but also alive.

Wizball

- **Year:** 1987
- **Publisher:** Ocean Software Ltd

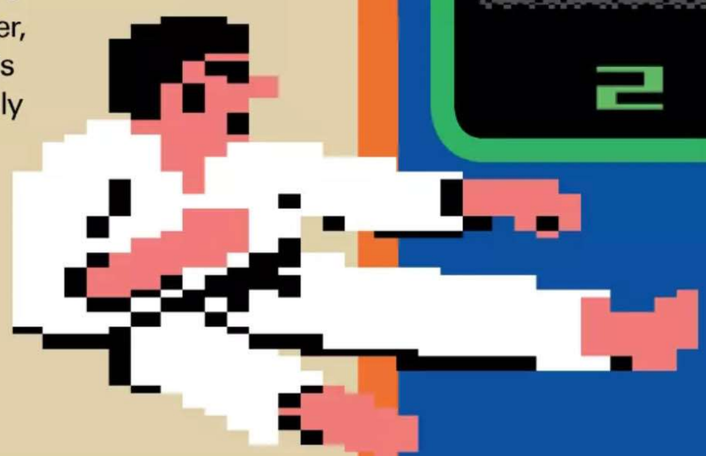
2

***Wizball* is one of our favourite ever C64 games, so it's gratifying to see it chart so highly.** Part platformer, part shoot-'em-up (with a healthy leaning towards the latter genre), *Wizball* remains a fantastic game that never fails to impress.

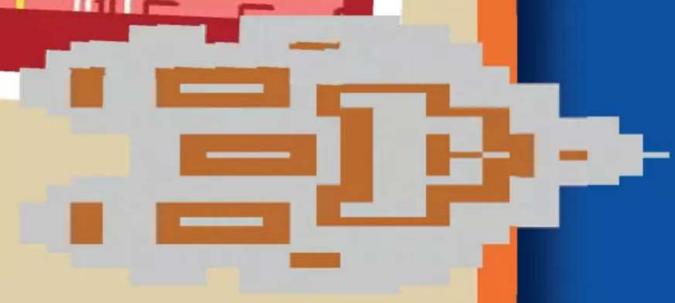
After the evil wizard Zark leeches Wizworld of its vibrant colour, Wiz and his pet cat Nifta attempt to restore the now drab world to its former colourful glory. This involves Wiz jumping in his titular Wizball and moving around the drab, monochromatic world while avoiding hazards and taking down waves of enemies. One of the most delightful aspects of *Wizball* was just how well its mechanics worked. Initially, you can only bounce around, which more often that not can get you into all sorts of trouble. As you shoot down waves of enemies they will leave pearls behind, which in turn light up seven distinctive power-ups.

A quick waggle of your joystick will select said power-up which can range from more powerful firepower, to thrust, and anti-grav: which gives you far better control over your spherical craft. Last, but by no means least, is the Catalyte, which enables you to switch control to Wiz's cat Nifta, so you can mop up droplets of colour as they fall to the floor.

It's a delightful system, fully controlled by the joystick, which easily captures the arcade experiences that were so popular at the time. It's also beautifully balanced, requiring you to switch between shooting and collecting in order to get through the eight large game worlds. Highly original – few other games have even tried recreating its magic formulae – it's a game that would work brilliantly on today's popular handhelds. For some, *Wizball* is a hardcore shooter, while others prefer its puzzle and co-op elements. Regardless of the type of game you think *Wizball* is, there's no denying that there's nothing else on Commodore's machine which is quite like it.



Paradroid 001



■ **Year:** 1985
■ **Publisher:** Hewson

1

Andrew Braybrook's *Paradroid* is a masterpiece, there's no other way to describe its sheer brilliance. Like *Wizball*, *The Sentinel* and many other games in this list, it's based upon the simplest of ideas, but Braybrook managed to make everything about it feel so much more epic. As with *Wizball*, at first *Paradroid* appears to be nothing more than another simple-looking shoot-'em-up. Look deeper, though, and you'll discover that it's so much more than that, offering a healthy blend of different genres that not only manage to keep the gameplay fresh and exciting, but most importantly, keep you going back for more.

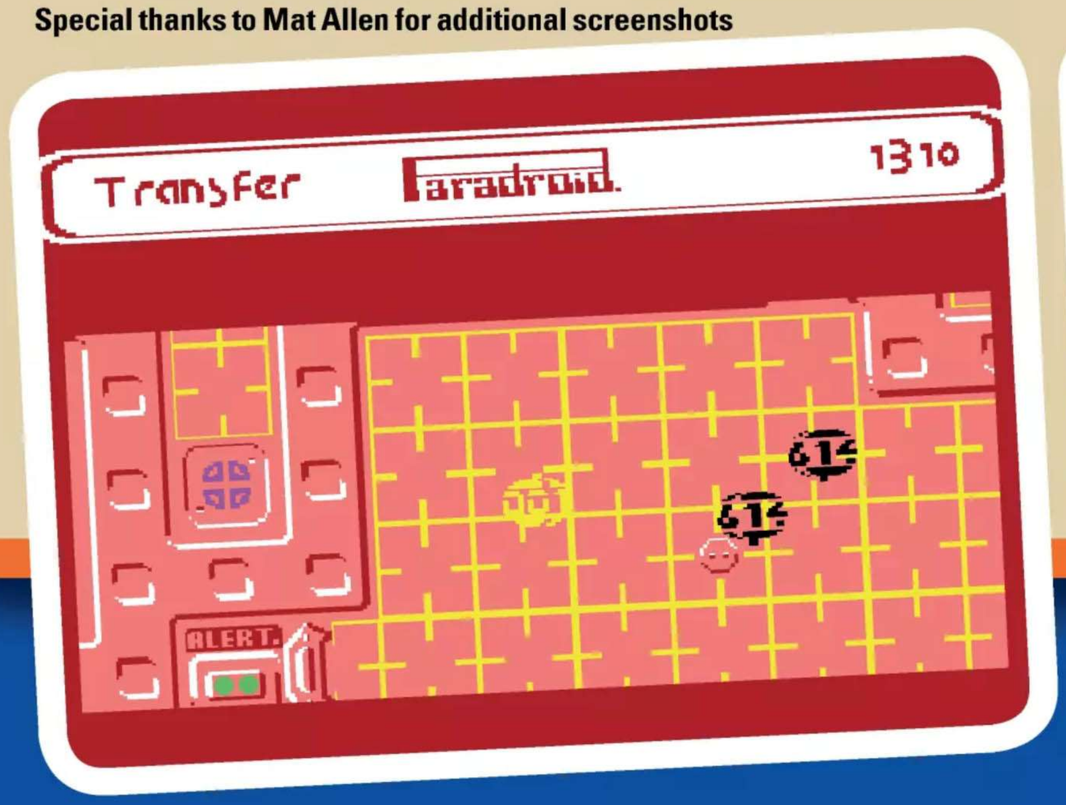
This is partly down to Braybrook's exceptional skill as a coder. As with *Uridium*, *Paradroid*'s coding is faultless, delivering impossibly slick scrolling and brightly designed play-fields that allow you to become totally immersed in the on-screen action, and prove to your non-C64-owning friends that they had backed the wrong horse. There are no niggles in *Paradroid*, no annoying little bugs to distract you from its absorbing gameplay; just a coherent, well put together world that draws you in to its murky depths and refuses to let you go. Andrew was a fervent arcade player back in the day – he still owns the original coin-op of *Rainbow Islands* – so it's no surprise to learn that both *Uridium* and *Paradroid* have the sort of slick presentation that was abundant in the popular arcade games of the time. In short, *Paradroid* is the arcade game you never got to play. Play it you will, though, because from the moment *Paradroid* sinks its claws into you, it refuses to let go.

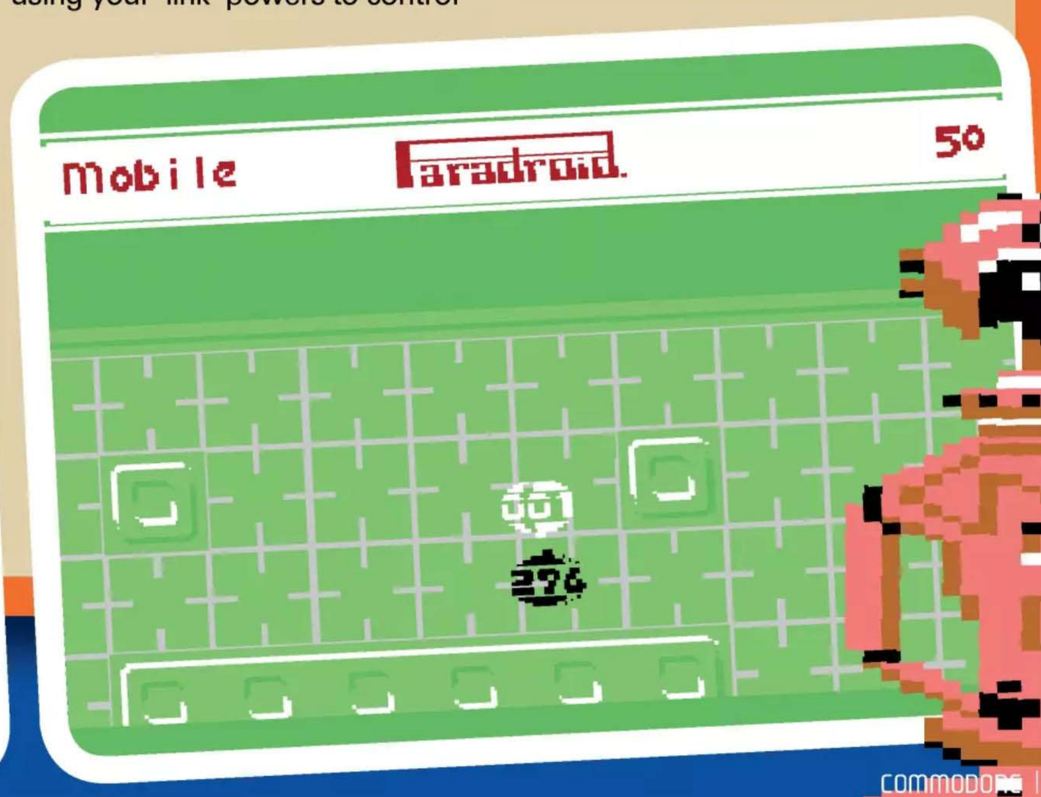
Paradroid is set on a huge multi-tiered spaceship that is overrun with hostile droids. The player takes control of a unique droid called the Influence Device, and has the task of destroying all the other droids found on the spaceship's 20 decks. All the other droids are far more powerful than your little Influence Device, as noted by the up to three digit numbers found on their sides. In comparison, the Influence Device has a rating of just 001, meaning it can easily be taken out by virtually every other droid.

Fortunately, while the Influence Device isn't too hot in a gunfight, it does have the handy ability to take over another droid by 'linking' to them. Once 'linked' to a droid – of which there are 23 distinctive types – the Influence Device earns all the skills and firepower of the droid in question, making its task far easier to complete. It's worth noting, though, that you can only control a droid for a limited amount of time, so *Paradroid* requires you to play aggressively, constantly hunting down weaker droids with your weaponry of using your 'link' powers to control stronger opponents. Even the linking isn't easy, though, as you need to complete a surprisingly complex mini-game first, which gets harder and harder as the droids get stronger and stronger. It's also worth nothing that linking to stronger droids isn't without its risks. Fail to successfully 'link' and your host droid will be immediately destroyed. Fine if you're already in another droid, but not so good if you're the Influence Device, as it immediately results in the game's end. As a result, *Paradroid* features a great risk and reward system where you have to gauge the best way to dispose of each droid that you encounter.

Highly influential, its possessing mechanic has featured in everything from *Space Station Silicon Valley* to *Messiah* and *Mind Jack*. *Paradroid,* for us, is the zenith of C64 gaming, and is a title that every gamer, C64 owner or otherwise, needs to play.

Special thanks to Mat Allen for additional screenshots

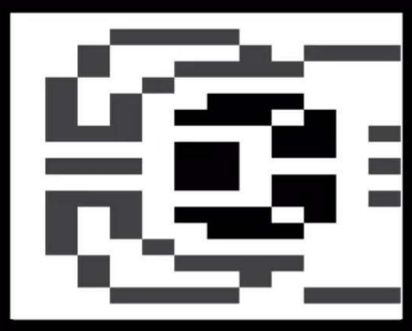




Uridium

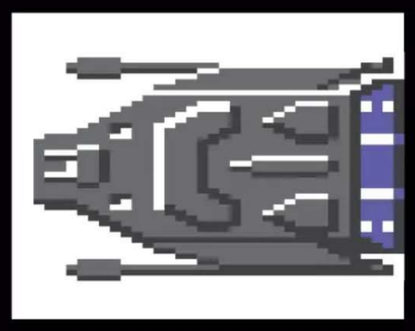
Eek! A super dreadnought has just appeared over each of the 15 planets in your galactic sector, and it's safe to say that they haven't just popped round to borrow a cup of sugar. In fact, they're draining planet cores to drive their power units – and they didn't even have the courtesy to ask nicely.

Presumably due to the typical government cutbacks seen in every other shoot-'em-up ever, all that's available to take on these monstrous foes is a squadron of single-seat fighters. Each dreadnought is attacked in turn, your Manta engaging surface defences and enemy fighters before landing and activating a self-destruct sequence via a mini-game that looks suspiciously similar to something you'd find on a fruit machine. This can only be, as long-time C64 fans will know, *Uridium*.



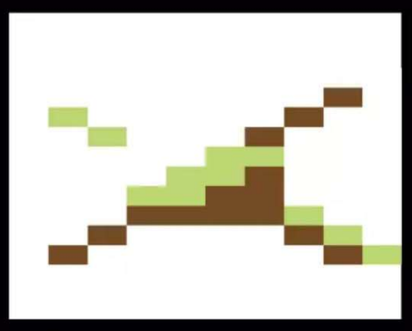
THE MANTA

Your ship, the Manta, is the key to the game. Although it offers plenty of firepower via its dual guns, its manoeuvrability is more important. Learn to control your craft's speed and flips to avoid hostile foes and ensure that you don't smash into dreadnought shields and comms towers.



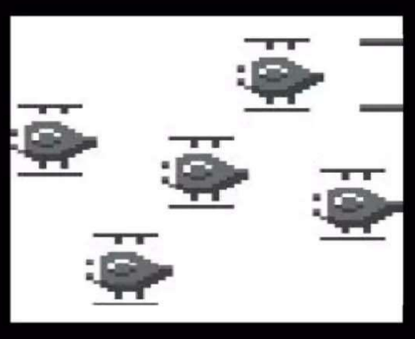
YOUR TRANSPORTER

The transporter is the first thing you'll see in each level of *Uridium*. It transports the Manta to the next dreadnought, and you're treated to a rather lovely animation as your ship exits to do battle. There's no practical reason for this item's existence, but it adds polish to the game.



HOMING MINES

Each of *Uridium*'s dreadnoughts has flashing ports on its surface. Be wary of these, because they house lethal mines that home in on your craft. Each mine only has limited fuel, and so if you can avoid it for a few seconds, you'll be fine – although later levels often launch them in pairs.

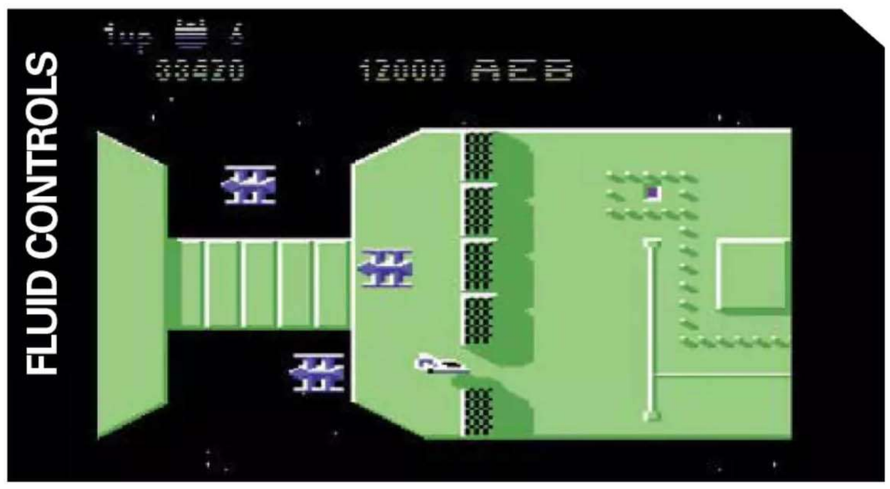


ALIEN SCUMBAGS

Enemy craft in *Uridium* increase in ferocity as you move through the game, but similar tactics work on even the highest levels. Ships in the game all have forward-facing guns, so stealthily sneak past and shoot them from behind. Waves are pre-set, so learn their movements and firepower.

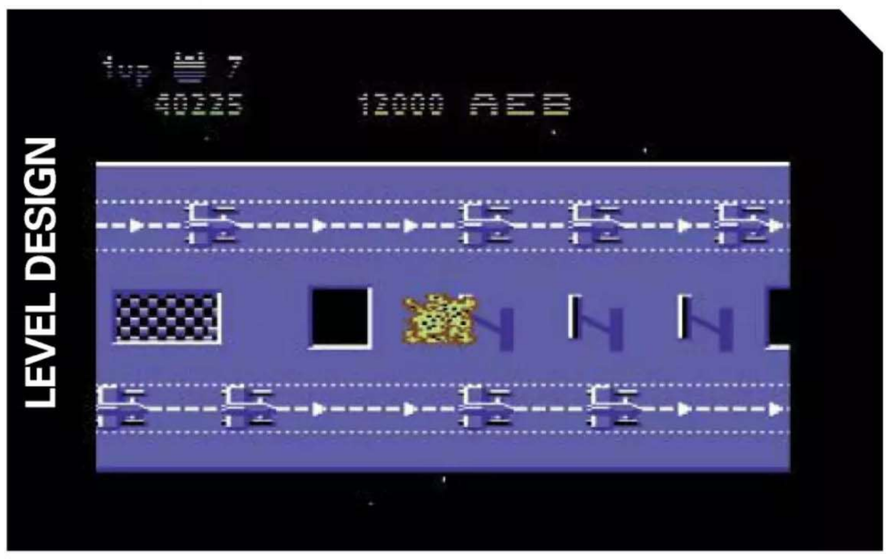
Speed, focus and a strong foundation

Uridium arrived in 1986, before *R-Type*-style shooters with weapon upgrades invaded the C64, and so it might seem simple. However, Andrew Braybrook's *Paradroid* follow-up has plenty to engage the arcade-oriented gamer. First, it's fast: at top speed, dreadnoughts zoom past and you need lightning-fast reactions to survive. Secondly, the game is focused: it has its aims and achieves them with style and polish. Finally, the foundation is strong, frantic and fun, so much so that *Uridium* was followed by *Uridium+* on the C64 and an impressive, expanded but still action-packed Amiga sequel, *Uridium 2*.



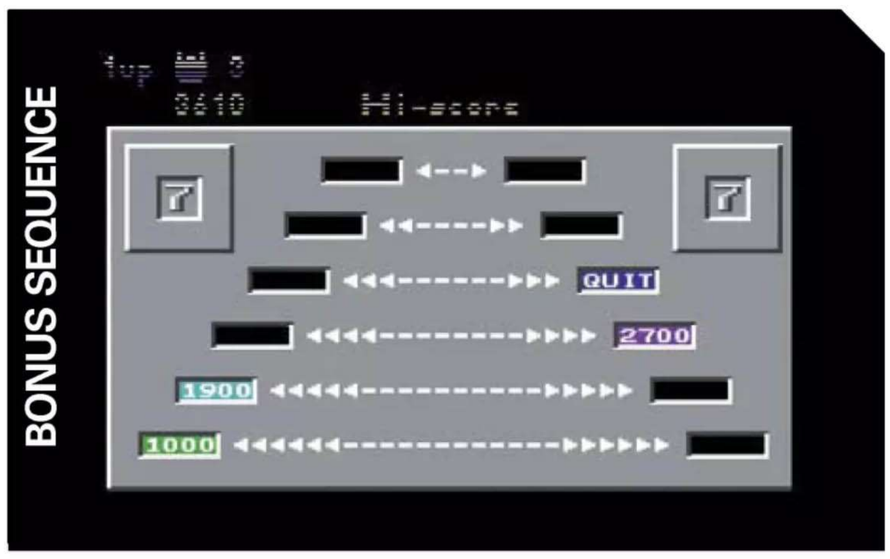
A manoeuvrable Manta

Around the time of *Uridium*'s release, most C64 shoot-'em-ups had craft little different from the *Space Invaders* laser cannon – you could move left, right and fire, and if you were lucky, you might also be able to move up and down a bit. By comparison, *Uridium*'s beautifully animated Manta is hugely manoeuvrable, with a number of cruising speeds, and the ability to flip over to chase hostile aliens and fly at an angle, in order to squeeze through gaps between shields and communications devices that litter the dreadnought surfaces. Only by mastering the Manta will you make any progress in *Uridium*.



Death from below

Much like Andrew Braybrook's previous games, *Gribbly's Day Out* and *Paradroid*, *Uridium* isn't an out-and-out shooter – you can't just wade in, all guns blazing, and hope to make it to the end of each level. Instead, you must map out each dreadnought in your mind, memorising danger areas, escape routes, clusters of Manta-destroying comms towers and shields, and the location of the primary landing strip that enables you to infiltrate the dreadnought's onboard system and blow it to kingdom come. Later levels are especially devious, with maze-like surfaces that require particularly skilful flying.



Don't be a quitter

We suspect that Andrew Braybrook perhaps quaffed a little too much coffee while putting together *Uridium*, our evidence being its bonus section. Whereas Jeff Minter's *Batalyx* – another 1986 C64 shooter with a bonus round – plonks you in 'psychedelic noodling land' if you fancy a break, *Uridium*'s end-of-wave respite comes in the form of a bonus game. Instead of enabling you to relax, it keeps the tension high, taking the form of a simple fruit machine-style timing test: at each 'level' you hit fire to hopefully select a chunky bonus rather than quit and return to the game proper.

Die (again), alien scum!

Although rather lacking in red pixels, *Uridium*'s one of the more bloodthirsty games on the C64. True, you're not faced with the dying eyes of alien foes, but there is a rather vicious element to the game once a level's complete. Post-bonus round, you're informed that the destruct sequence has been primed, and you're then returned to the game. As the dreadnought vaporises before your very eyes, there's just time for one more fly-past, and you can strafe any remaining surface targets for bonus points, presumably yelling 'Take that, alien vermin!' as you do so.

The Last Starfighteridium

Although very much designed for the C64, *Uridium* nonetheless made its way to a handful of other platforms. The ZX Spectrum port was particularly good, and there were workmanlike efforts for the BBC Micro and Amstrad CPC. By far the strangest conversion, though, was to the NES. Arriving in 1990, Mindscape's *The Last Starfighter* – released six years after the middling movie, making it a strange tie-in in itself – was *Uridium* in all but name. Some elements were altered – the main ship's different, and the transporter's absent – but otherwise this is a surprisingly faithful, if curious, NES remake of a C64 original.

What the press said… ages ago

Zzap!64 (94%)

"*Uridium* is truly an impressive game, immaculate in both its execution and conception. The Manta is very responsive indeed and is a pleasure to control, skilful handling providing a similar joy to that of *Defender*. Overall an excellent game that should be on every 64 owner's software shelf."

C&VG (10/10)

"Andrew Braybrook's *Uridium* is simply the best 64 game we've seen since *Fist*. It's good-looking, sounds great, and the action comes thick and fast. If you're a 64 owner and you don't rush out and grab this game, there's no hope for you."

What we think

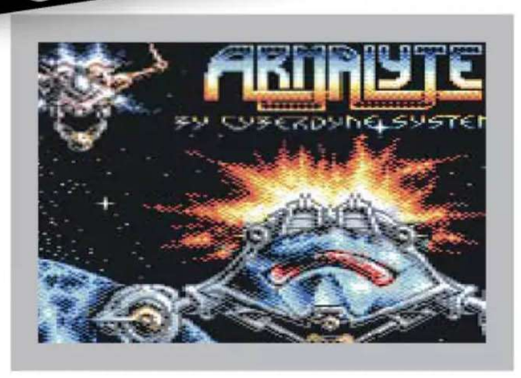
Uridium might seem a controversial choice for these pages, and it's fair to say that it today feels a little basic and at times unforgiving. But the gameplay mechanics are great, and the combination of fast-paced shooting/survival and considered, devious level design ensures *Uridium* a place among the C64's best blasters, regardless of its relatively minimal nature.

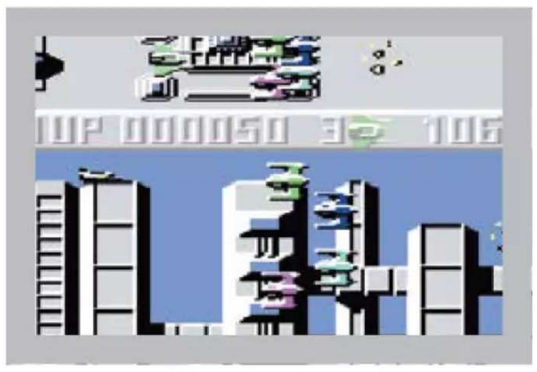
IN THE KNOW

- **PLATFORM:** COMMODORE 64
- **PUBLISHER:** HEWSON CONSULTANTS
- **DEVELOPER:** ANDREW BRAYBROOK
- **RELEASED:** 1986
- **GENRE:** SHOOT-'EM-UP
- **EXPECT TO PAY:** £1

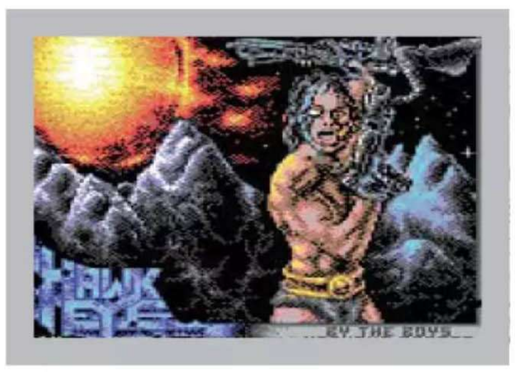
COMPANY PROFILE

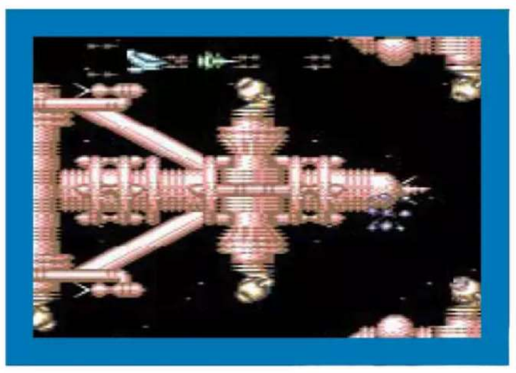
THALAMUS

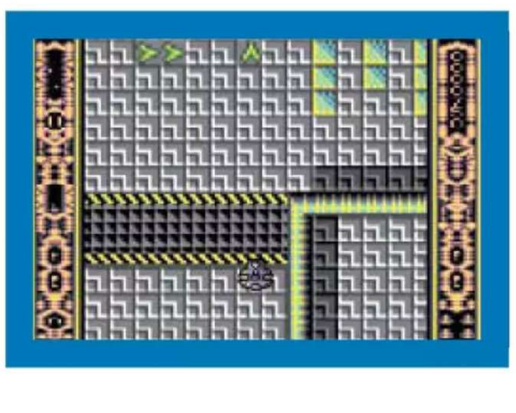


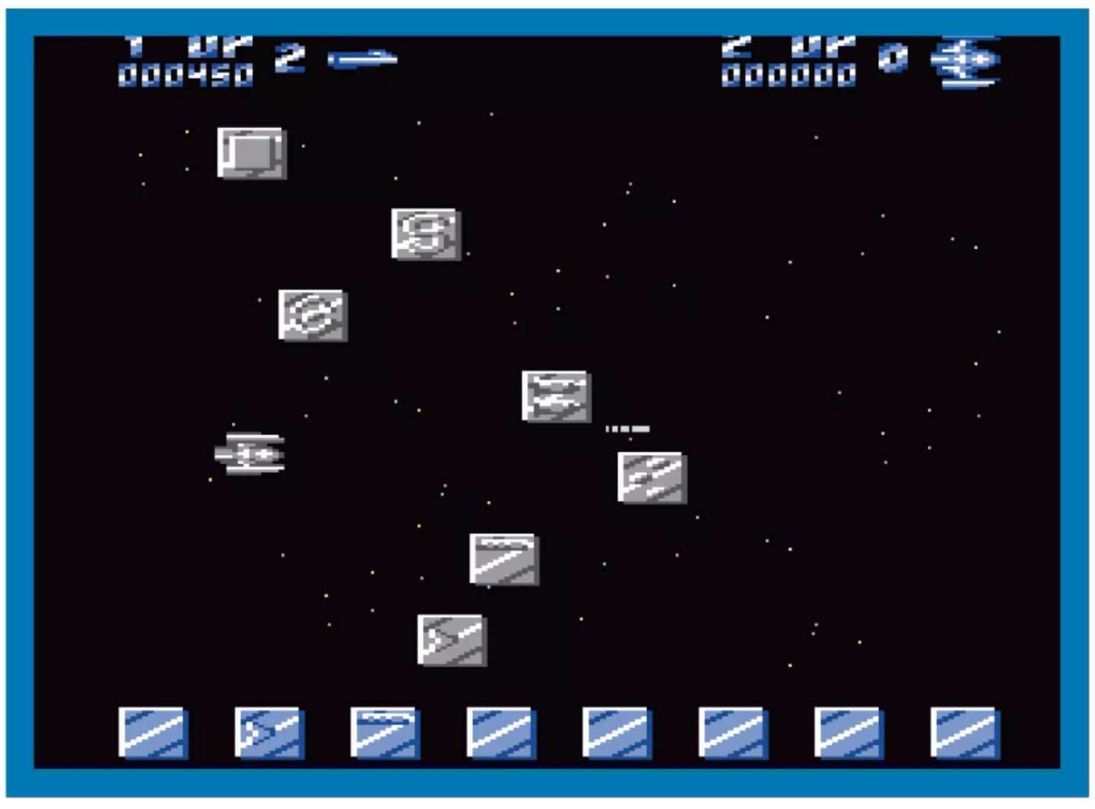


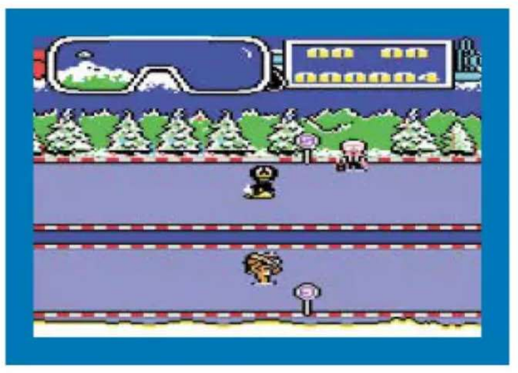
AN IN-DEPTH LOOK AT ONE OF THE COMMODORE 64'S MOST POPULAR PUBLISHERS











BRAIN STRAIN

The Thalamus logo stood for quality, with the company specialising in tough shoot-'em-ups and platformers, particularly on the C64. The escalating costs of developing for new machines saw the firm close its doors after just seven short years. Andrew Fisher looks back at the diverse range of programmers and the aftermath of the company's bankruptcy…

Newsfield director Roger Kean remembers, "Visitors to the London computer game shows at Earls Court and Olympia in late 1985 to early 1986 often suggested that Zzap!, particularly, ought to publish games, so the pressure to do something about it came at first from the reviewers Julian Rignall and Gary Penn. In the end, it was me who finally said Newsfield could do it and found a software publishing house, and then went on to persuade the other directors. It was obvious to us that we would need to poach someone with development and marketing experience, and Andrew 'Flathead' Wright (a regular Ludlow visitor in his role as Activision's PR manager) seemed ideal and was interested."

Many in the industry had doubts about the label's independence from the magazines that would review its products. EMAP, Newsfield's main rival, was selling off its software label Beyond. Roger continues, "We rented premises in London. Admittedly, these were in the same building as the London editorial team for LM Magazine, but then those people had little to no interest in games or the people putting them together. Obviously, as a wholly owned subsidiary, the Newsfield board kept tight reins on the Thalamus operation, but only from a management point of view. As to the Zzap! editorial people, they enjoyed no more or less advance information than they were used to getting from other developers at the time. Indeed, Gary Penn famously rubbished one Thalamus game (*Delta*) in a review."

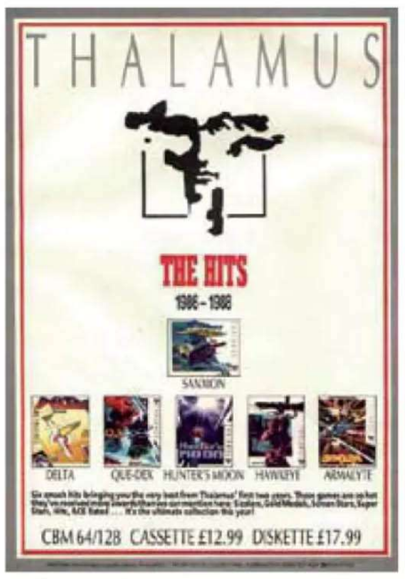
Ex-Zzap! editor Gordon Houghton continues the story. "The relationship between Newsfield and Thalamus was perfectly professional, as far as I remember. They certainly didn't feel like the same company; in fact, I didn't know they were until someone told me. On an editorial level they kept the two companies quite separate. Newsfield never applied any pressure to give good marks to any game, let alone Thalamus ones. It was never even mentioned. They were quite happy as long as we could back up any rating we awarded with reasons for doing so." Gordon did come under pressure once, but more on that a little later.

Someone else was needed to work alongside Andrew Wright though. "The other Zzap! staff writer, Gary Liddon, was of course a coder, and spent a lot of his spare time slogging away on a C64," continues Roger. Gary had worked at Domark before joining Zzap! and was more than happy to tell us how he got the Thalamus gig. "I got my place at Zzap! through sheer force of will and lots of enthusiasm rather than on the basis of talent," he admits. "To be honest I fitted better in game development and Thalamus was a great step into that industry. Andy Wright was a good friend who was working at Activision as a PR guy, but was really unhappy and wanted to do something else. I had a lot of time for the high-ups at Newsfield having faith in a 19-year-old and a 20-year-old to set up and run a games publisher. It's crazy on the face of it but worked out well for everyone."

THE HELSINKI HEX HERO

The fledgling company attended the 1986 PCW Show as part of the Newsfield stand. "Julian got chatting to this tall, thin streak from Finland with the unlikely Greek-sounding name Stavros Fasoulas, who had the better part of a C64 game ready," recalls Roger. "Julian kept on raving about it and invited Stavros up to Ludlow after the computer fair ended. Penn and Liddon also admired the game, while arguing that it still fell short of being a winner. Stavros himself still wanted to add a deal more complexity, a process which took a few months while he

» Pieter Opdam (at the back) meets John and Steve Rowlands on the Thalamus stand, PCW Show 1989 (courtesy of Jason Kelk).



» *The Hits*, a great compilation of early Thalamus games.

camped out in the flat Penn and Liddon shared." This flexibility on deadlines and the urge to polish a game would become a Thalamus hallmark. Gary remembers, "We offered loads of feedback to Stavros. To be honest, I think that may have been a bit of a pain in the arse for him. I later ended up a programmer and it's great getting external feedback on what you're working on; however, that feedback needs to come at the right time and place. I'm not sure how much Stavros was helped on *Delta* and *Sanxion* by a daily deluge of suggestions on what would be good in the game."

Stavros called it *Rainbow Warrior* after the bonus sections, but Gary suggested changing the name after the sinking of the Greenpeace ship. So the first Thalamus release became *Sanxion*, with Jon Twiddy's Cyberload, Mat Sneap's loading screen and Rob Hubbard's soundtrack. Eager for a follow-up, work started on *Delta*, another horizontally scrolling shoot-'em-up, with the backgrounds drawing inspiration from *Nemesis* and *Salamander*. Gary regards it as his favourite Thalamus game. "I can see it polarises opinion, and can completely understand why some people can't stand it. I really like the music and it hypnotically merged with the gameplay. For me Rob's contribution to that game almost equals Stavros's. We

» The Thalamus Star, a response to US Gold's 'History in the Making' ads.

IN THE KNOW

Thalamus was formed in 1986 as the software label of Newsfield, famous for its computer magazines such as CRASH and Zzap!64. With several key Commodore 64 titles under its belt, it looked to expand to 16-bit machines and the Spectrum in the late 1980s. The liquidation of Newsfield in 1991 and the rising cost of development left Thalamus with low funds and many unreleased titles before it closed in 1993. The name was revived for Thalamus Publishing, which released a book of Oliver Frey's artwork in 2006.

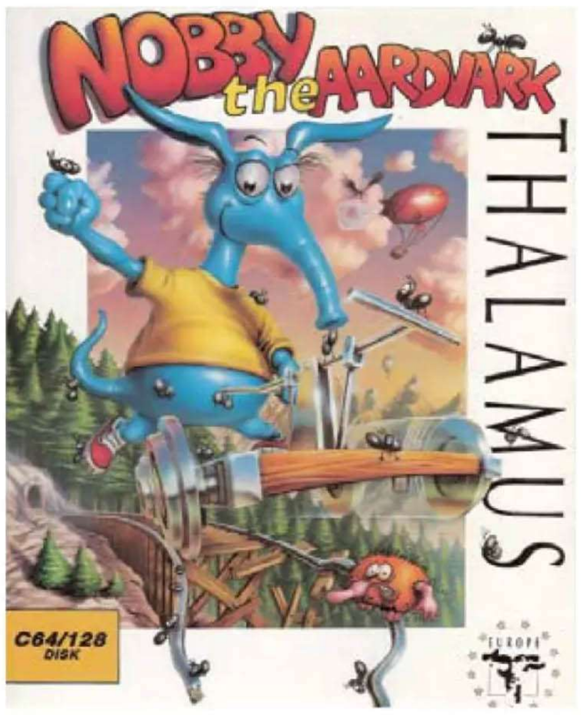
COMPANY PROFILE

THALAMUS

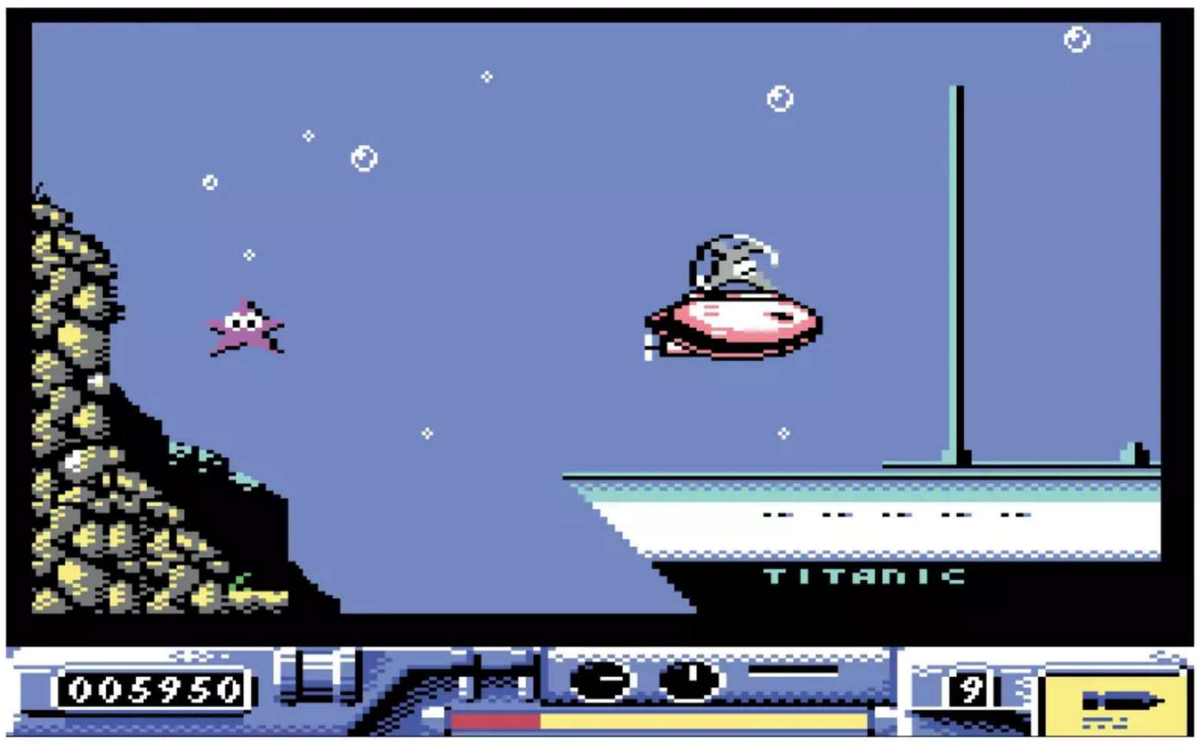
PUBLICITY

The logo was one memorable aspect of Thalamus. Roger says, "I thought Oliver's logo was brilliant, simple but with so much impact. It looked great on T-shirts." Oliver describes it in *The Fantasy Art Of Oliver Frey*: "I wanted something that indicated sensitivity and a determination to win, and an eye gazing into a distant, imagined future or past." The Thalamus Club offered merchandise like watches and free pencils during its short existence. Another collectable is the psychedelic 'Fuzzy' given away with *Creatures*. Former Newsfield writer Richard Eddy joined the company to handle PR.

The box artwork was also used for adverts, with distinctive white borders. The 'Thalamus Star' adverts resembled a tacky tabloid front page, with bizarre headlines ('Aliens stole my brain') and facts about forthcoming releases. The 'Gold Rush' promotions for *Hawkeye* and *Armalyte* each had special golden cassettes distributed, which could be returned to Thalamus for a prize.



» Displaying its Thalamus Europe logo, the disk box for *Nobby The Aardvark* (C64).

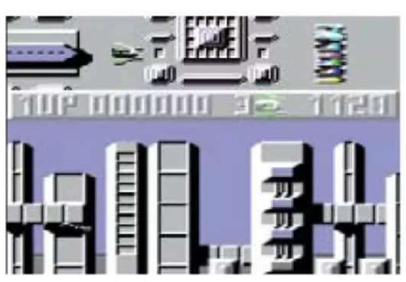


» Nobby sails past the wreck of the Titanic in his one-aardvark submarine.

got on really well with Rob and felt he went the extra mile for us. I'd say some of his best work is in the Thalamus games we worked on."

The third game in the Stavros trilogy was *Quedex – The Quest for Ultimate Dexterity*. Each of the ten levels was a maze, requiring different tactics for the shiny metal ball to reach the goal. Stavros had to call a temporary halt to his programming career, returning to Finland for his compulsory national service. After programming the Amiga game *Galactic*, he went on to form Terramarque (which merged with another Finnish label Bloodhouse to become Housemarque). Thalamus was in need of new blood, and newly recruited producer Paul Cooper was on hand to work with potential candidates. Gary Liddon had left to join Electronic Arts, while Andrew Wright had gone back to Activision. Gary states, "The trigger was being refused a profit share or ownership in the company. It just seemed fair that given we were creating a lot of value we should have some stake in it. That was pretty firmly rebuffed." Did Gary have any regrets about leaving the company? "I think when me and Andy left, the company had a great and very defined image along with a couple of great games that'd done very well. The games were 99% down to Stavros but I think we created a way of presenting them to the public that was distinctive and did them no harm. So I'm pretty proud to have been involved in that and I'd say that firm footing we left the company on seemed to work as a lightning rod for some great up and coming talent in the games industry.

"I CAN SEE IT [DELTA] POLARISES OPINION, AND CAN COMPLETELY UNDERSTAND WHY SOME PEOPLE CAN'T STAND IT." GARY LIDDON

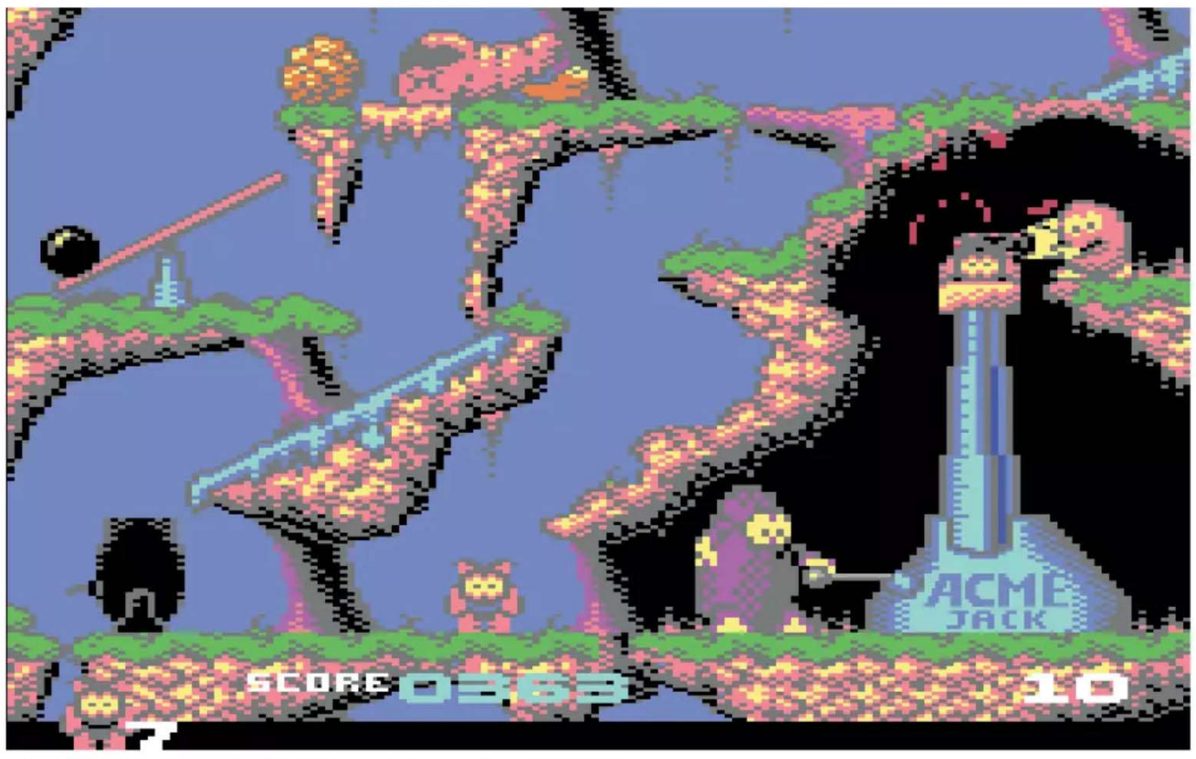


I know quite a few of the people who made stuff for Thalamus after mine and Andrew's time, and they're really talented people still doing well today."

SECOND WAVE

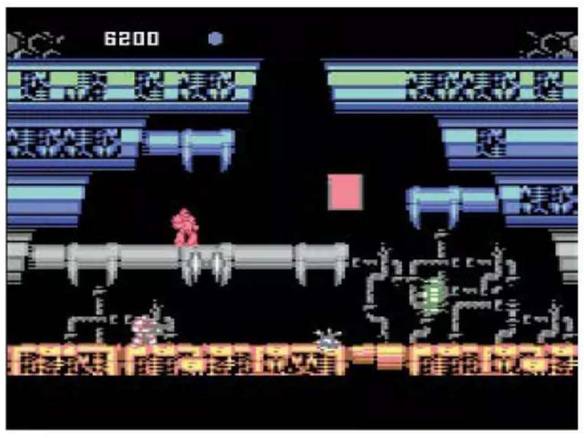
Martin Walker had previously worked on several licensed products including *Back To The Future*, which was completed in rapid time to a very strict storyboard. His

» Thalamus made great loading screens and *Sanxion's* was no exception.



» Clyde's friend is sliced up by Mr Chainsaw in the excellent *Creatures*.

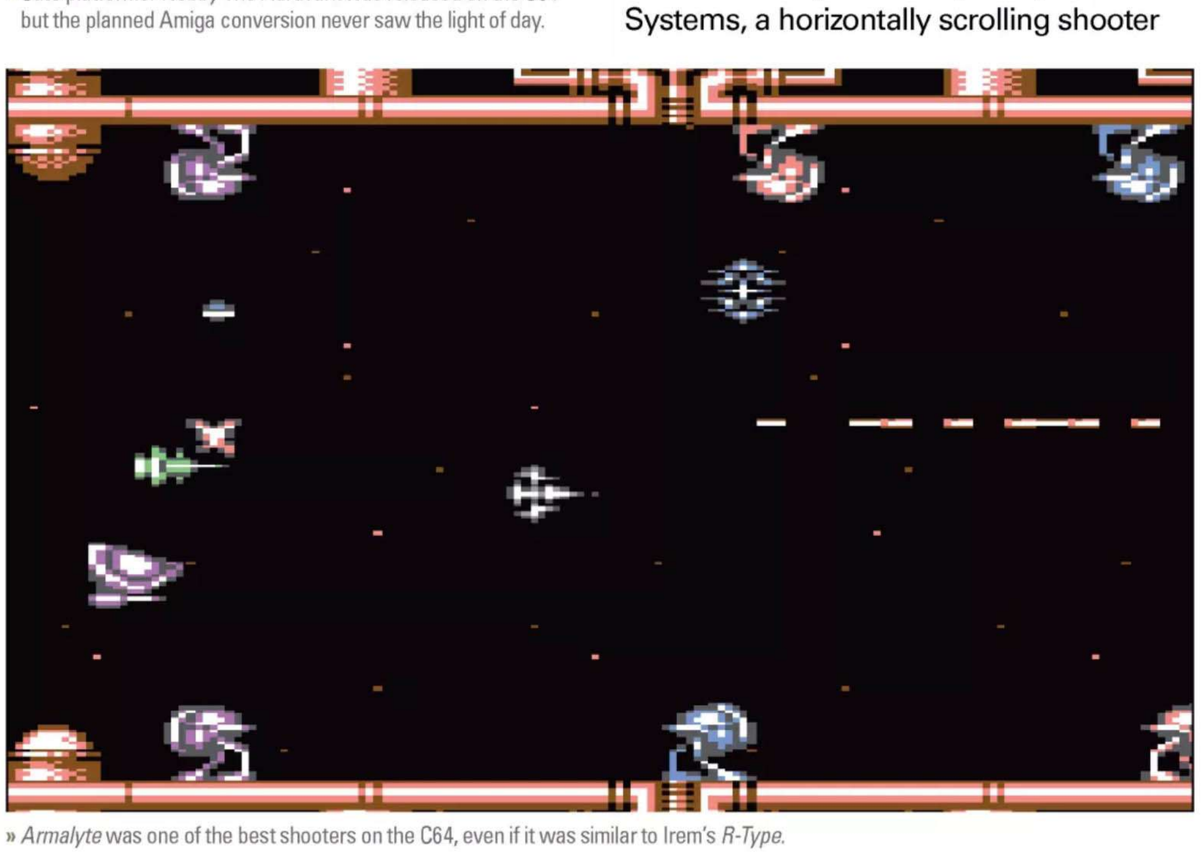
» Richard Eddy & Robin Candy (Newsfield employees at the time) model Thalamus T-shirts.



» Major Dan Damage's hobbies include origami, skiing and blowing up planets.

project for Thalamus was a cross between a puzzle game and a shoot-'em-up – *Hunter's Moon*. In addition to the excellent shooter, Martin contributed music and sound effects to various other Thalamus games before creating the superb *Citadel*

» Cute platformer *Nobby The Aardvark* was released on the C64 but the planned Amiga conversion never saw the light of day.



» *Armalyte* was one of the best shooters on the C64, even if it was similar to Irem's *R-Type*.

"A DESERVED GOLD MEDAL WENT TO ARMALYTE FROM CYBERDYNE SYSTEMS, A HORIZONTALLY SCROLLING SHOOTER THAT REALLY STRETCHED THE C64. THALAMUS FOUND ITSELF WITH ANOTHER HIT."

for Electric Dreams. After a few years concentrating on music, Martin left the industry for good.

The next Thalamus release was *Hawkeye*, a game that divided critics and players. The Boys Without Brains created a good-looking game with parallax scrolling, great music by Jeroen Tel and an amazing animated intro sequence (the face of a Xamoxian telling the story behind the game). Beneath the gloss however was a tough, repetitive platform shoot-'em-up. Gordon Houghton came under pressure to give the game a good mark and ultimately it was awarded a Gold Medal. C&VG (published by EMAP) gave it a terrible 3 out of 10, while Commodore User's verdict was a more respectable 8. "I think EMAP underrated it and we (more specifically, I) overrated it," admits Gordon. "I was going to give it a Sizzler at the time, but felt pressured by one of the Thalamus people to up the rating. Not bribery – just heavy persuasion, to which I was unfortunately susceptible. It was my first month in the job and I probably wanted to please too many people too much of the time. It's not a mistake I made again, however; it had nothing to do with the Newsfield people, it was all down to me."

Fortunately, a deserved Gold Medal went to *Armalyte* from Cyberdyne Systems, a horizontally scrolling shooter that really stretched the C64. With an eerie soundtrack from Martin Walker and some extremely striking visuals, Thalamus found itself with yet another hit. "*Armalyte* was the best horizontal shooter on the C64, and still one of my favourite shooters today," states Gordon. (For more on *Armalyte*, see issue 36's 'Making of' article.) The team of Dan Phillips, Robin Levy and John Kemp moved to System 3 and the planned sequel was never finished.

PLATFORMS & PITFALLS

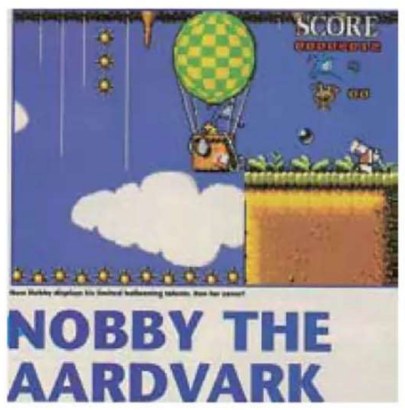
Keen to stretch its wings to other formats, Thalamus created *Mind-Roll*, an Amiga and PC conversion of *Quedex*, and followed those with a Spectrum conversion of its popular C64 shooter *Sanxion*. Another high-scoring debut game was the excellent *Retrograde* from Apex Computer Productions – John and Steve Rowlands. Thalamus took a gamble on Apex's short track record in the industry, but it was a gamble which paid off. The problem was the speed at which finished games were being released. Several key projects, like *The Search for Sharla*, were proving to be very slow in development – but Thalamus chose not to rush games out of the door.

In 1990, Apex created *Creatures* – or 'Clyde Radcliffe Exterminates All The Unfriendly Repulsive Earth-ridden Slime' to use its full title. The game had a dark sense of humour; between scrolling levels filled with cute enemies, Clyde would have to rescue his fellow Fuzzies from devious 'Acme' torture devices. The sequel had six fiendish devices to stop, with more variety coming from three other sub-games. Helping out was Andy Roberts, Commodore Format's tips expert. After writing a letter full

» Platform shoot-'em-up *Hawkeye* received very mixed reviews.

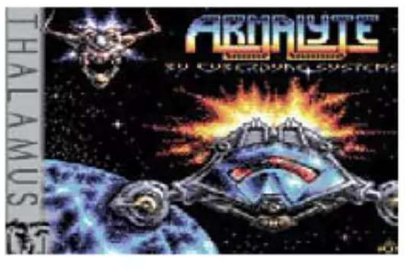
UNRELEASED GAMES

Thalamus closed its doors with several titles left incomplete. Among the most eagerly anticipated was *The Search for Sharla*, a 3D strategy game in the style of *Lords of Midnight*. All that survives are screenshots and the novella. The licensed games *Q8 Team Ford Rally Simulation* and *Arsenal FC* also failed to reach the shelves, despite lots of publicity. Conversions figure highly on the AWOL list. The Spectrum versions of *Creatures*, *Armalyte* and *Bombuzal* (under licence from Image Works, the Mirrorsoft label) did not get finished, but a demo of *Armalyte* appeared on a Your Sinclair covertape. *Armalyte 2* for the C64 got as far as demo form, with a weapon shop and reused graphics. Amiga users missed out on *Beastmaster* (inspired by *Shadow Of The Beast*), *Nobby The Aardvark* and *Restrictor* (described by programmer Richard Underhill as "a cross between *Galaxy Force* and *OutRun*/*Afterburner*").



FINEST HOUR

ARMALYTE (C64, 1988)
Regularly topping polls for the best shoot-'em-up on the Commodore 64, there can only be one winner here. Everything works so well, from the extra weapons to the soundtrack. Cyberdyne Systems may have been unhappy with the marketing ploy of labelling it 'Delta 2' but it surpasses the gameplay of the earlier Stavros Fasoulas title. Play it on the original machine though: the Amiga and ST conversion (Armalyte: The Final Run) is a pale imitation.



COMPANY PROFILE

THALAMUS

» Maximus collected Acme crates to assemble a vehicle, enabling him to get to the next level of *Summer Camp*.

of suggestions to the Rowlands, Andy ended up heavily involved in both games – from writing the manuals to designing the graphics.

John Ferrari decided to take up programming to fill the winter months when he wasn't working as a builder. After producing numerous budget titles for Codemasters, John came up with the enjoyable *Summer Camp*. Maximus Mouse had to get to the Moon via a series of single-screen sections to find an American flag for the opening of Camp Wotadump. A simple enough concept, but a sound one. John also worked on the *Arsenal FC* football game, viewed from the side when other games had adopted the overhead *Kick Off*-style view. Sadly, John died in 1996.

Thalamus published more titles for the Amiga and ST, but they were less well received. The 16-bit conversion of *Creatures* failed to make much impact, and Pieter Opdam's *Venom Wing* had great graphics but difficult gameplay. Graphic artist Metin Seven worked alongside Pieter. Metin recalls, "It was like a dream signing a contract with Thalamus. They had become a respected name in the games business. I'll never forget when Paul Cooper came over to the Netherlands for a few days, and during that weekend we signed the contract. When the game was released it received reviews ranging from bad to satisfactory, and the satisfactory ones were published in Zzap!64 and The Games Machine, both magazines from the Newsfield publishing company, who were the owner of Thalamus." A dispute between Pieter, Metin and musician Ramon Braumuller over the difficulty level saw the team split up. "Thalamus did pay a sum of money that corresponded to the proceeds they had estimated, but we have never checked what the actual proceeds from all *Venom Wing* sales were. Ramon and I used our share of the proceeds to travel to Britain and attend the Personal Computer World show together with Pieter." Pieter would go on to work at Team 17 on projects including *Worms*,

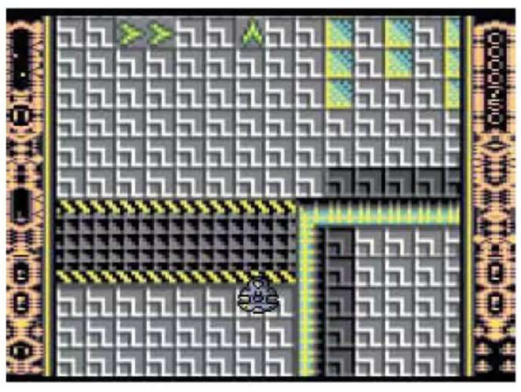
GAMES REVIEWS

HEATSEEKER

C64, 1990

» Programmer Paul O' Malley's sequel to his earlier game *Arac* has an environmental theme and an unusual style. The player controlls a Leg as it hops around the rainforest. On top is the Ball, which can be thrown out to kill enemies and, more importantly, absorb heat from fires. This heat can then be passed on to giant Plants, which open their leaves to protect the forest against acid rain.

81%



SNARE

C64, 1989

» A temporal portal hides a maze with the promise of a rich reward at the end of it. Programmer Rob Stevens took elements of *Tron*'s light-cycle game and created some fiendish puzzles. Jumping, shooting aliens and hitting switches are made more difficult by the snap 90° turns of the screen as you move. Shiny graphics and great music from Martin Walker round out the experience, underrated at the time.

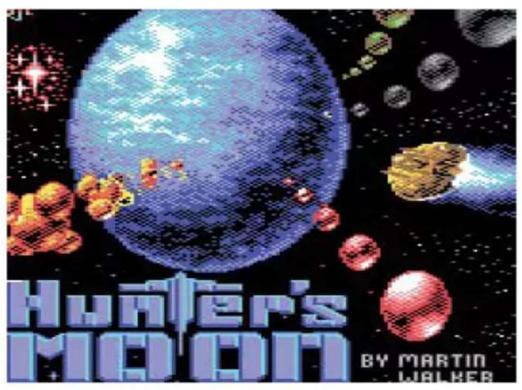
90%

RETROGRADE

C64, 1989

» John and Steve Rowlands' rock-hard blaster has a very clever weapons upgrade system. The first step is collecting cash and the 'planet busters' from the surface. Then it's vertically scrolling platforms as you head down the ducts into the core. With the planet in ruins, the hero flies off to confront a huge mothership that is destroyed by shooting it to bits. A challenging game that is brilliantly presented.

95%



HUNTER'S MOON

C64, 1987

» Martin Walker's polished shoot-'em-up is worth revisiting. The enemy workers 'draw' the walls of the level as the player's Hunter spacecraft searches for starcells that show the way home. The puzzle elements become more devious later on, and the off-duty 'loop trainer' mode recalls Jeff Minter's work. An end sequence by Robin Levy and Cyberdyne Systems and some unusual sound FX make it memorable.

93%

WINTER CAMP

C64 & AMIGA, 1992

» What made this special were the cartoon graphics and varied styles of play. Maximus Mouse has to learn to ice skate, canoes down a river, throws snowballs in an *Operation Wolf* style level, follows a tune played on icicles and rolls down the mountain side in a giant snowball. All this to stop an eagle causing an avalanche! Elements of the game were inspired by a reader competition in Zzap!64.

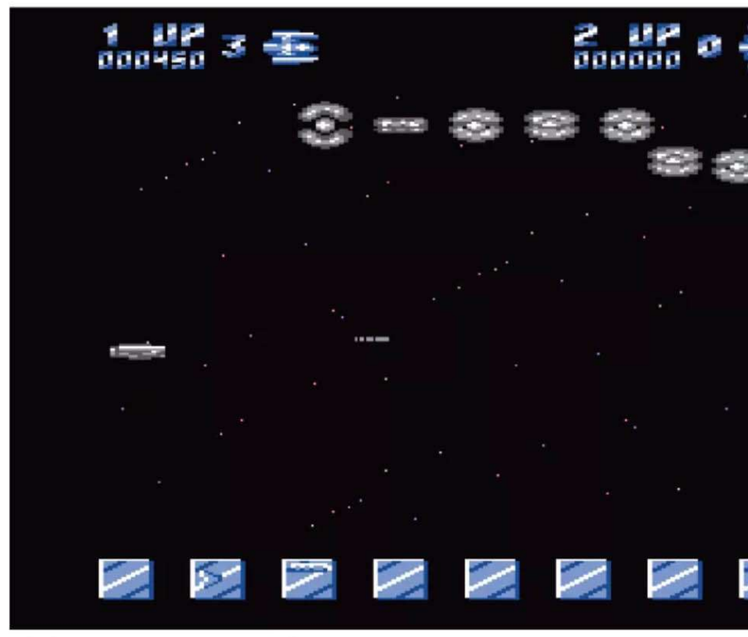
86%

BOROBODUR

AMIGA, 1992

» *Venom Wing* was very tough, and Pieter Opdam's next game was just as difficult. Subtitled 'The Planet of Doom', *Borobodur* starts out as a platform game with some very polished graphics. After fighting your way through the jungle, it then switches to a 3D hoverbike racing game. The two styles alternate until you reach the final bad guy in his huge robot suit. Very tough, but it looked great.

79



» *Delta* was a slick shooter. The Spectrum version wasn't.

» You could play *Sanxion* by looking at either screen.

while Metin and Ramon joined forces with programmer Reinier van Vliet to write numerous games.

THE SLIPPERY SLOPE

A big shock occurred when Newsfield went into liquidation. Thalamus had to go out on its own, trading as Thalamus Europe. Roger reveals, "My recollection is a bit hazy, but we let the then-management of Thalamus (which included David Birch) do a management buy-out on some kind of sliding payment deal over time; this was a short while before Newsfield's September '91 demise. Thalamus carried on for about a further two years, but in the end it was caught out in the squeeze of underfunding and the increased costs of developing for the new console devices. Certainly, before Newsfield let go of control, the drain on central funds due to the rapidly increasing development times was having a detrimental effect – if not on final profits, certainly on cash flow. I would never go so far as to say that Thalamus Games brought Newsfield down, but it definitely contributed."

"The big problem was Newsfield Publications going bankrupt," admits musician Ashley Hogg. "That was a short way into *Nobby The Aardvark* if I recall. For the most part, we were left to our own devices but, as usually happens, the project took longer than we were hoping. The up-front advance was pretty low, offset by a higher royalty rate, but cash was tight – always a problem for small developers anyway. Thalamus got bought out and Codemasters asked me to move to their locale and help out with a project. Dave Clarke and Jon Smyth finished up the C64 version over the following few months and eventually it got a release. The Amiga version died right there. But I was pleased that I managed to cram so much music into the C64 version." As for his memories of Thalamus Europe, at that time, "Thalamus was a really small outfit basically run by one guy out of a small office. Even handling production of one game, that was pretty tight back then. I also seem to remember the liquidators' reports making interesting reading…

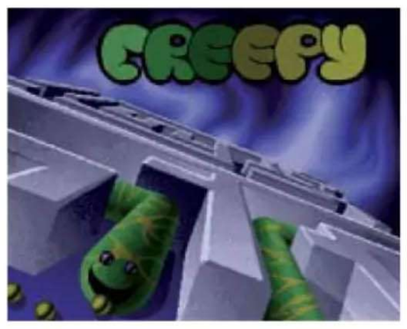
"Thalamus struck a deal with budget label Kixx to republish many of the older titles and provide much-needed cash. The last game to be released was *S.U.B.* (Strategic Underwater Battles), an Amiga strategy title imported and translated by Thalamus. The 62% score from Amiga Power was a sad end. Left in limbo were several titles (see UNRELEASED GAMES) including the potentially lucrative *Arsenal FC*. Gary Liddon says, "Best memory? Well it's just one big best memory. As for the worst? It was sad to see it decline over the years, then going bust."

GAME OVER?

There was life after death (of a sort) for Thalamus. Andy Roberts started a new label called Thalamus Interactive. With Steve and John Rowlands on board, as well as C64 coder Jon Wells, the company was responsible for *Zidane Generation Football* and *International Karate Advance* on Game Boy formats. Andy says, "The initial premise was to bring the back catalogue to modern-day formats such as the Game Boy Color (which was just entering the peak of its life-cycle). After spending what seemed like days on the phone with lawyers and liquidators, all of the Thalamus titles, with the exception of Stavros's games, were lined up for a phoenix-like rebirth. The furthest we got was a GBA demo; getting original product on to the Game Boy was exceedingly difficult, most publishers preferring the security of a big-name licence. And thus we switched to developing original ideas and IPs, but with the emphasis firmly on quality (I'd always liked the way that the gloss and polish of Thalamus titles was of an exceptionally high standard; you were always guaranteed a top-notch product)." According to Andy, "The Thalamus back catalogue remains locked in a fireproof safe, just waiting for the right moment to make a comeback."

Roger Kean and Oliver Frey formed a new company called Thalamus Publishing. The book most games fans were interested in appeared in April 2006 – *The Fantasy Art Of Oliver Frey*, including several examples of Oli's artwork for Thalamus. Roger says, "There has been a decade-long discussion about a History of Video Gaming but it always looked like no-one would be that interested. Up until 1996 we were still heavily involved in creating hint and tip books on games for various book publishers like Virgin, Carlton and Prima in the United States. *The Fantasy Art Of Oliver Frey* by no means featured all the material the still remains in Oli's possession, so there will probably be a second volume for everyone to enjoy in another year."

> "AFTER SPENDING WHAT SEEMED LIKE DAYS ON THE PHONE WITH LAWYERS AND LIQUIDATORS, ALL OF THE THALAMUS TITLES, WITH THE EXCEPTION OF STAVROS'S GAMES, WERE LINED UP FOR A PHOENIX-LIKE REBIRTH."
> ANDY ROBERTS

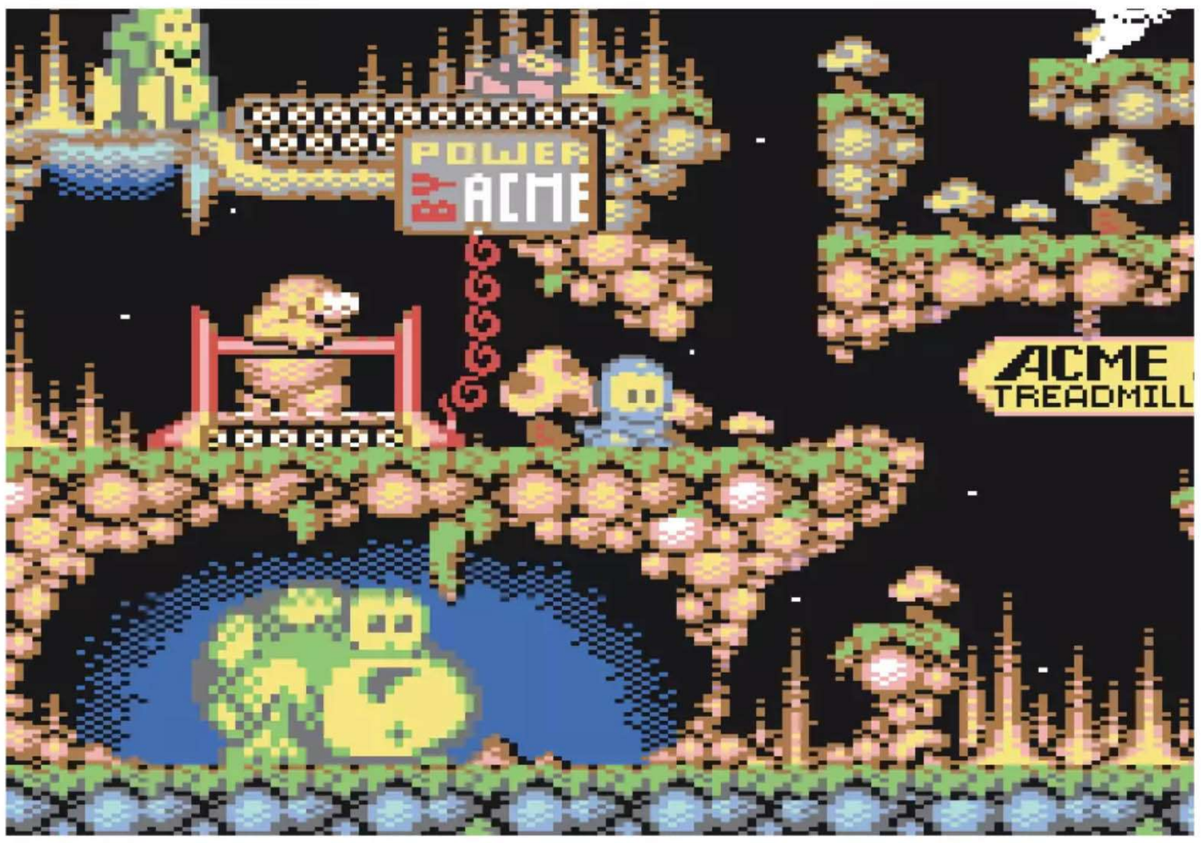


AVOID LIKE THE PLAGUE

CREEPY (Amiga, 1990)
Not the finest moment in Thalamus's history, *Creepy* is an uninspired clone of *Snake* produced by a French team. The worm slithers around a maze, eating pellets and trying to avoid crashing into its own tail as it grows. It really did not stretch the Amiga or gamers and soon proved frustrating.

THE DELTA CONTROVERSY

Delta on the Commodore 64 had great graphics, an amazing in-game tune from Rob Hubbard (part Pink Floyd, part Philip Glass as suggested by Gary Liddon), and the unforgettable Mix-e-load:with a joystick, C64 users could remix the Rob Hubbard loading music. It also had the power-ups its predecessor *Sanxion* lacked. But *Delta* only got a 74% rating from Zzap! (and a bad review from Gary Penn in particular), due to the need to learn patterns and the tricky credits system for earning extra weapons (trying to pick up something you don't have enough credits for kills you, and you need to keep topping up the extras). *Delta* did earn a Screen Star from EMAP's Commodore User, but Your Sinclair voted the Spectrum version (*Delta Charge*) 'worst game of the year' in 1990. Many put this down to the rivalry between YS and Crash.



» *Creatures 2* was a truly stunning sequel, and proved just what could be achieved on the Commodore 64 in skilled hands.

» More frosty shenanigans with the aptly named *Winter Camp*.

Paradroid

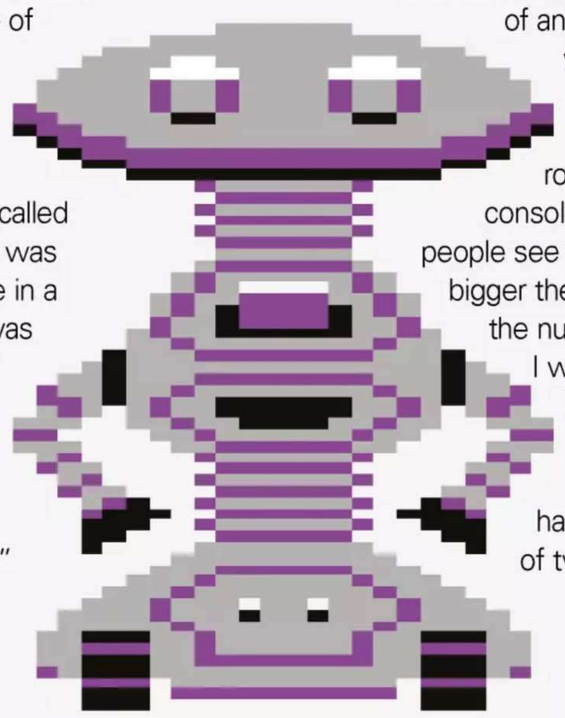
What links a heavy metal album, a James Cameron film and a mainframe computer? They all helped inspire Andrew Braybrook to make Paradroid, and he looks back to its creation and the games that followed with Andrew Fisher

IN THE KNOW

- **PUBLISHER:** HEWSON
- **DEVELOPER:** GRAFTGOLD
- **RELEASED:** 1985
- **PLATFORM:** C64
- **GENRE:** PUZZLE

Andrew Braybrook started *Paradroid* after finishing *Gribbly's Day Out*. "It was our practice to print out the final version of the code and then add comments. It wasn't practical to waste disk space on comments in the code while writing the game so we'd spend two or three days adding notes to the code on paper. We'd also go to the launch of the game, usually at a bar in London, and maybe visit one or two offices to promote the game to the magazines. We didn't take a big break between games, there was a momentum to keep up." One of those visits ended up having an unexpectedly important outcome for Braybrook. "That all happened when we took *Gribbly's* to *Zzap!* Towers in Ludlow. They liked it, and Chris Anderson was keen to do something like a diary for the next game, and we thought that might be fun and not too intrusive. I just wrote a paragraph every evening on the events of the day. I used to plan out what I was going to do that day on the walk to Steve's house, and that was all the planning I needed."

Andrew reveals *Paradroid*'s main inspiration came from some of his previous work. "The game was originally based on a COBOL game I had written on the mainframe six years earlier, called *Survive*. The objective there was to be the last player left alive in a multi-level environment. It was a multiplayer game and had two computer-controlled assassins, so the players used to gang up on them to take them out first and then battle it out to the end."



Paradroid's distinctive look used an overhead view with robots depicted as their serial number. "The animation of Gribbly showed me that I could animate sprites and save a lot of bytes. Top-down games tend to need at least eight directions of animations and that was going to be too expensive. So I figured that if I showed the robots bigger in the console lookup system to let people see the robots side-on and bigger then they might accept the numbers on the disks. I was also influenced by the cover of the Black Sabbath album *Technical Ecstasy*, as it had line-drawn blueprints of two robots." The cover

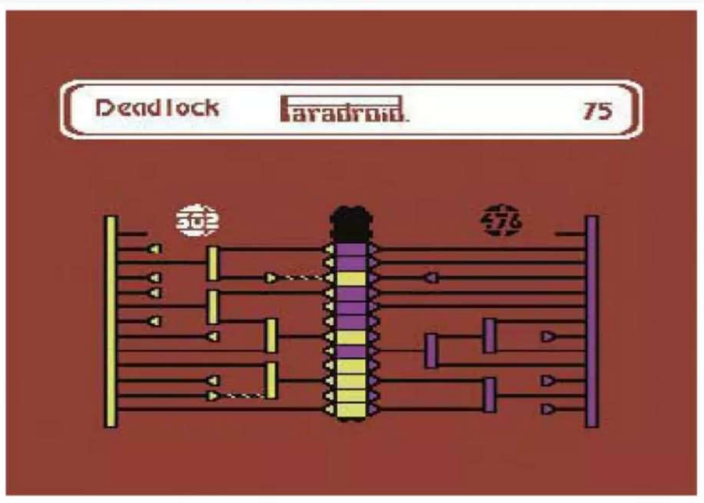
showed two robots 'interfacing'; the lyric sheet had the blueprints.

"I had tried to draw some real ship graphics but found it difficult to get a good look in multi-coloured graphics mode. I tried single-colour mode and that dictated a scale of the graphics that also didn't suit trying to look real, so the whole idea of the game being a radar-driven map was born. Quite possibly the movie *Aliens* had an influence on the look," says Andrew. One routine made things complicated. "The robot graphics are only shown on-screen if they would be visible by line of sight from the player, another *Survive* feature. The function to efficiently work that out was interesting to write with only three registers. We had the COBOL code to refer to, but it took a while to get that right. I also remember a mysterious crash which took me three days to find."

Interestingly, *Paradroid* was built around existing code that Andrew had available. "We usually did strip down the last game. Things like the scroll routine, sound player, input routines and movement routines would be saved, possibly tweaked and tested before starting the new game," he explains. "That bought a bit of time to think about designs. I had a book of fonts and had inherited a multi-character printing system from *Gribbly's* that allowed me to make letters out of two characters high graphics, or 2x2 for capital letters. I needed a more futuristic font and set about drawing one from the book. I had bought a couple of editors for the sprites and character sets; that made life a lot easier as it was quicker to create the graphics." Lots of paper was used during production. "We did write a lot of stuff down, diagrams, formulae, that kind of thing, as we were just coding with the Spectrum and the C64, and they weren't well suited to loading up multiple applications at once. So a pad of paper was always handy." ▶

» Oli Frey's original artwork for issue seven of *Zzap!* (with thanks to Roger Kean).

» The re-worked graphics of Heavy Metal *Paradroid*, released on the Rack-It budget label.



» This transfer game is deadlocked at six-all, the player must try again on a new layout.

» The lights go out when all the robots on a deck have been dealt with.

The 24 robot types had a small portrait shown when the consoles were accessed. "I had a budget for the number of sprites available, so I set about designing a system to reflect images in multi-colour left to right to save images, and there is some re-use. I wanted to group them by the top digit of the three-figure ID number, and having about three different robots per series seemed about right. I had to vary the features of the robots with speed and weaponry and that tended to suggest designs." Class 883 was familiar to viewers of *Doctor Who*. "I'm a big fan, it was just a nod to [the Daleks]. That became a bit trickier when I wanted to put them into the 16-bit version. We did draw the full graphics but bottled it at the 11th hour and changed them. I had also done a Dalek game for the mainframe, just with letters for graphics, so I had a fondness for the movement and the brutality of them."

Testing feedback changed the controls. "I had a couple of failed control modes, all to do with firing. I started with a separate gunsight that you optionally move about. But whilst it could hit a static target quite easily, there was no way you could hit a moving target, and you had to stop moving so you're a sitting duck. The second method had a floating gunsight in front of the player, but that meant you have to move straight at the thing you're shooting at; again making you an easy target, and you'll crash into your target if it proves impervious to your firing." Colliding with another robot in transfer mode launched the excellent sub-game. The player and robot fought for control of a circuit board. Success gave the player access to the new robot and failure destroyed the current robot – meaning game over if that was the Influence Device. "I needed a way of balancing the game so that it would be difficult to move too far up the hierarchy of robots in one go. The transfer game switches the emphasis from many against one to one-on-one in an instant. It just all came together and worked in one go. That doesn't happen all the time, but it just worked. Steve even used it again in one of his games."

There were eight Robo-freighters to conquer, starting with Paradroid – which gave the game its name. Itsnothardenuff, the last ship, repeated. "The ships still get harder, it's all algorithmic, but the layouts of all the ships are the same as the maps do take up a fair amount of space. Each map is made of 4x4 character blocks and the ship has 16 maps. I could only get to about the fourth ship, so I figured it was tough enough, and anyone who got through eight ships was going to be some kind of superhero."

Oliver Frey's striking *Zzap!* cover celebrated the Gold Medal review. "I didn't like our box art at all, it looked so toy-like, but the robot on that cover had power. I tried to persuade them to let us use that artwork but they wouldn't. It was such an honour to make the cover anyway, and the image was so good. The game graphics are supposed to aspire to the art, not the other way round."

The following Christmas a *Uridium* and *Paradroid* double-pack launched, featuring the improved Competition Edition. Who was behind that? "The marketing department, I would suspect. Once the game has been out for a while then they try and mop up the non-believers with a bargain."

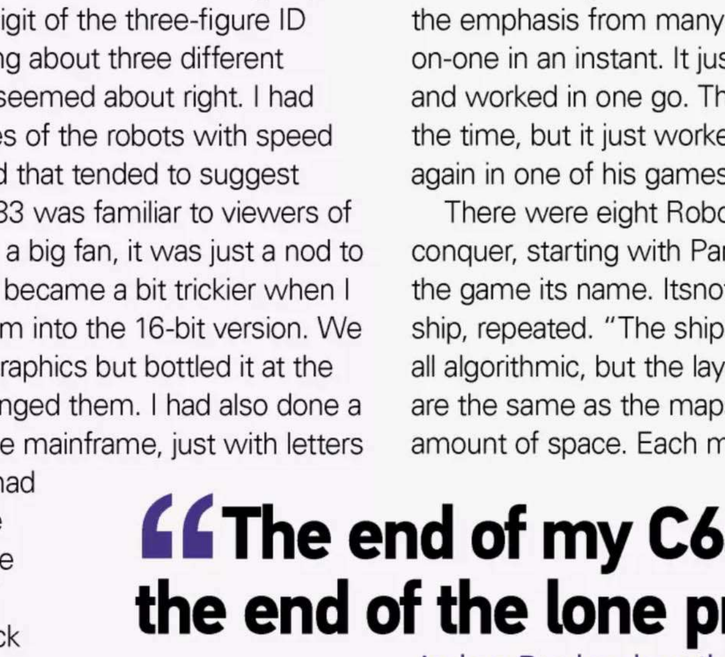
Returning was easy, thanks to those copious notes. "As long as you're still using the same development gear then you stay familiar with the process, so it's not so difficult." Andrew continued tweaking *Paradroid*, resulting in a third version. "The Heavy Metal edition came about as I was doing *Morpheus* about two years later. I wanted to try out the graphics look and *Paradroid* was sitting there – so I redrew every character in multi-colour mode in that style and switched the graphic mode over. I decided to use the style in *Morpheus* and I made some other speed tweaks in *Paradroid* and got it running at a higher frame rate, so I figured I should show everybody."

Steve Turner took inspiration from *Paradroid* (see Droid Dreams boxout) and Graftgold created a 16-bit sequel. "After we had done *Rainbow Islands* on the Amiga and Atari ST I was looking for a new title. We had a lot of the tools developed for the map building so it seemed a good fit for the code we had. Dominic Robinson had written a game core system that gave me a ready-made interface to the hardware." Was it an easy transition? "We were keen to write on 16-bit. The big transition was going from character-based backgrounds to bitmaps, which I had used on *Lunattack* and on the Dragon 32, and Steve had used on the Spectrum, so we knew what the plot routines had to do. The code was lovely; all those registers. It gave us a real freedom."

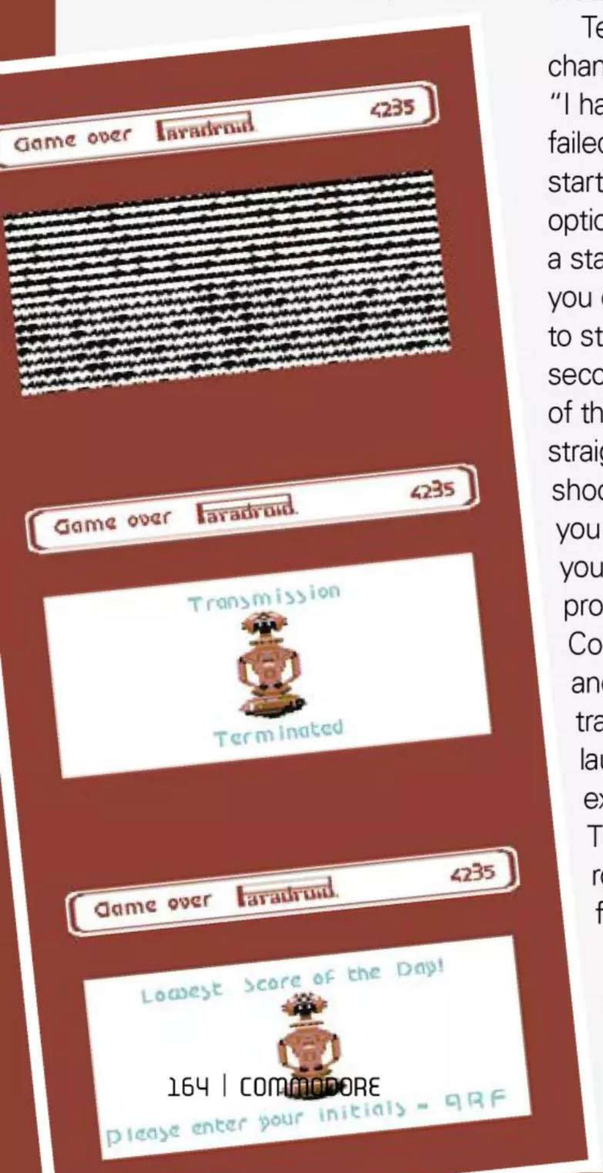
"The biggest change, and I didn't twig it at the time, was that the end of my C64 games was also the end of the lone programmer era. After that it was a team effort. I usually had someone else help out with the sound ▶

"The end of my C64 games was also the end of the lone programmer era"

Andrew Braybrook, on the transition to 16-bit



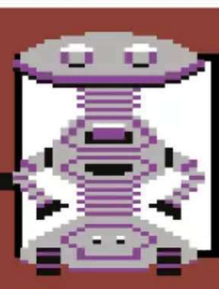
» Game over. Static, the Command Cyborg as transmission is terminated, and a chance to enter your initials.



WE ARE THE ROBOTS

These are the droids you are looking for

TYPE 101
■ The player starts off controlling the Influence Device, armed with a weak laser. Lose this and it's game over.



TYPE 123
■ The slow-moving disposal robot is very weak.

TYPE 139
■ This is another disposal robot that sweeps up after itself.

TYPE 247
■ This servant robot was one of the first to use an anti-grav system, but is not armed.

TYPE 249
■ You cannot see this three-legged robot walking, but it is slow.

TYPE 296
■ The tray on this robot's head is for carrying drinks.

TYPE 302
■ A faster-moving messenger designed to carry parcels.

TYPE 329
■ A small wheeled robot, it is unarmed and so the Influence Device's laser is used.

TYPE 420
■ The higher the robot's class, the more pulses available in the transfer game.

TYPE 476
■ This is the first robot with a strong single laser. Worth seeking out in the early stages.

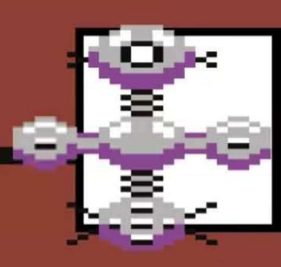
TYPE 493
■ Another maintenance robot, this one carries its own toolbox.

TYPE 516
■ Usually found on the top decks of the ship, befitting its crew droid status.

TYPE 571
■ The crew droids may move quite quickly but have no armament of their own.

TYPE 598
■ Crew droids may also be fairly well armoured, taking multiple hits to kill.

TYPE 614
■ The first of the Sentinel droids, all armed with strong lasers.

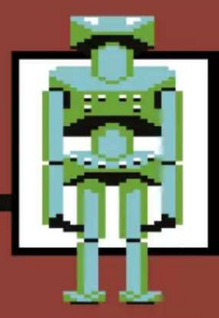


TYPE 615
■ Moves slower than 614, but it is equipped with good sensors.

TYPE 629
■ The console describes an unseen variation with an autocannon instead of a laser.

TYPE 711
■ Battle droids are heavily armed and armoured. The small laser of the Influence Device will not damage them.

TYPE 742
■ Another tough battle droid, the disruptor's explosion flashes the whole screen black and white briefly and damages nearby robots.



TYPE 751
■ This battle droid became the face of the game, on Oli Frey's cover and the loading screens for later versions.

TYPE 821
■ Twin lasers and fast movement make this a formidable opponent.

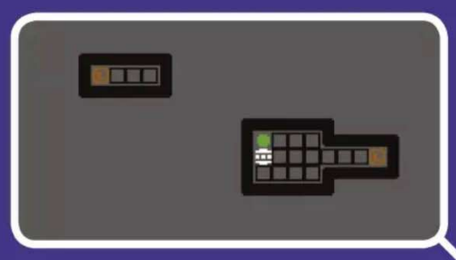
TYPE 834
■ Another fast mover, so be on your guard around it.

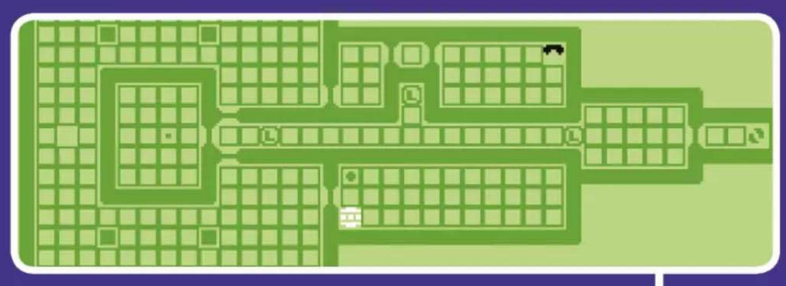
TYPE 883
■ The dreaded 883 inspires fear in humans for some reason.

TYPE 999
■ The ultimate Command Cyborg can only be influenced for a short time before the player must seek a new host.

ALL HANDS ON DECK

Andrew Braybrook gives insight into Paradroid's ship design



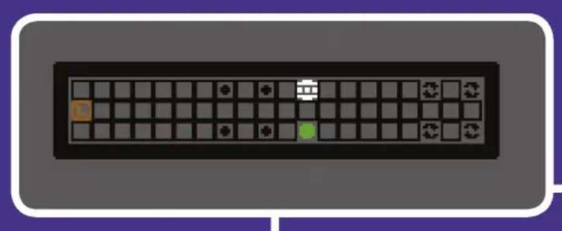


OBSERVATION

1 The two halves of the observation deck are accessed from different lifts, and both must be cleared of robots to shut the deck down.

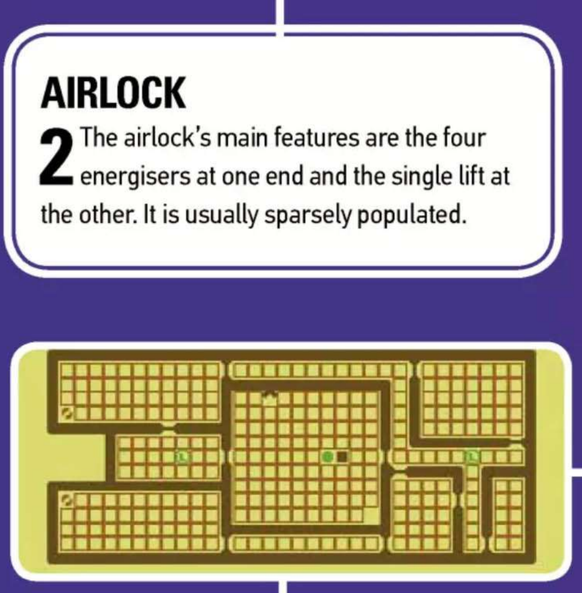
RESEARCH

5 "Generally crew droids here. Possibly sentries too."



AIRLOCK

2 The airlock's main features are the four energisers at one end and the single lift at the other. It is usually sparsely populated.



REACTOR

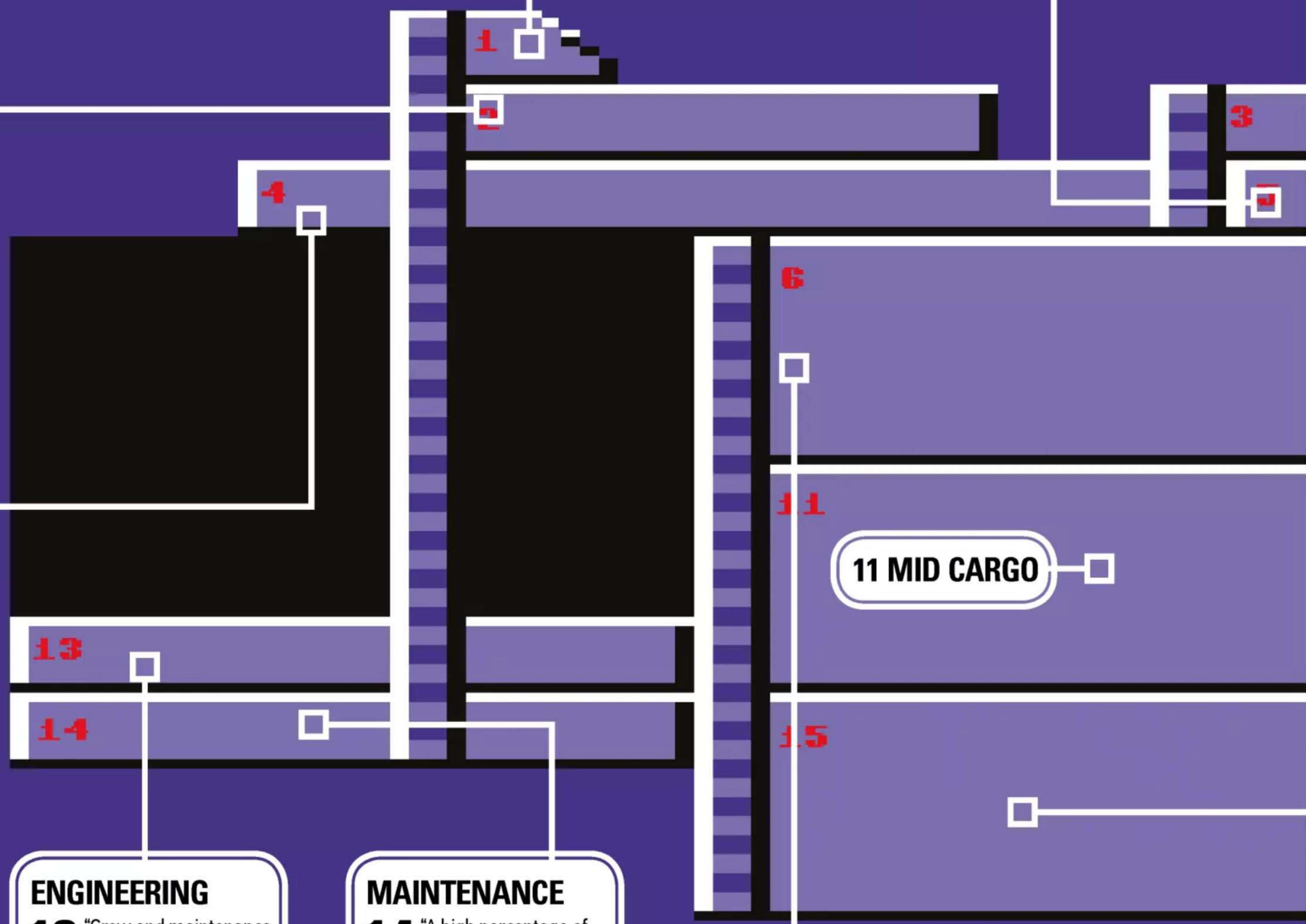
4 "You would generally find crew and maintenance droids here. Since the crew droids would not be heavily armed they would only act as a staging point to larger robots."

ENGINEERING

13 "Crew and maintenance droids will mainly be in attendance here. Messenger droids might be here too."

MAINTENANCE

14 "A high percentage of maintenance droids with some lower level ones in case of emergencies."



UPPER CARGO

6 "The cargo is mainly battle droids, so expect a contingent of dangerous droids." The same is true for the vast mid cargo deck below, often including the 883 patrolling among the cargo containers.

▶ effects and music, but apart from that I did the vast majority of the graphics and the coding. That gives you confidence in the code; you know exactly what is going on all the time. I did do some *Paradroid 90* graphics, but I had to become a team leader too." That team included Dominic Robinson and artists John Cumming, Michael Field and John W Lilley.

Jason Page created the sound. "When I started at Graftgold, I was mainly a programmer but moved into the audio side of things. For music, I'd write the original using NoiseTracker. I'd then type in all the data as hex into the Graftgold audio player code. After *Paradroid* I wrote a new sound routine and editor, which we used in future titles." Did the original influence him? "Oh yes. Hence there being lots of warbling sounds and such like. They were iconic C64 *Paradroid* sounds, so I wanted to keep those. It was important to keep the overall feel of the original."

Andrew explains why the decks scrolled vertically and abstract droids became proper graphics. "The ST wasn't keen on horizontal scrolling. We did have a full scrolling version on the ST, but it didn't look pretty enough. It took a lot of memory to prepare all the combinations of the graphics blocks. That decision didn't go down too well with the Amiga crowd! We had enough space to do the animations, and having 16 colours on-screen it seemed right to draw the graphics in a real style. We did try the blueprint style but it looked weak against some of the prettier games of the time."

The robot line-up changed, joined by new human raiders. "I wanted there to be some familiarity with the C64 content, it was a 16-bit implementation of the same game as far as I was concerned. The raiders were a mechanism to speed up progress towards the end of the ship when there aren't so many robots about. There was also a bonus pirate ship that you got at the end if you had completed all the ships and collected all of the Graftgold keys. It was only a small ship, but very tough."

DEVELOPER HIGHLIGHTS

MORPHEUS
SYSTEM: C64
YEAR: 1987

INTENSITY
(PICTURED)
SYSTEM: C64, ZX SPECTRUM
YEAR: 1988

URIDIUM 2
SYSTEM: AMIGA
YEAR: 1993

Would Andrew have changed anything? "*Paradroid 90* was as good as it could have been. If we had done another Amiga version then it would have scrolled in all directions and run at 50 frames a second. There were difficulties so we'd have used a different publisher in hindsight." Andrew reveals Gary Foreman was close to completing a PC Engine version with a two-player mode; development was halted by Hewson's bankruptcy.

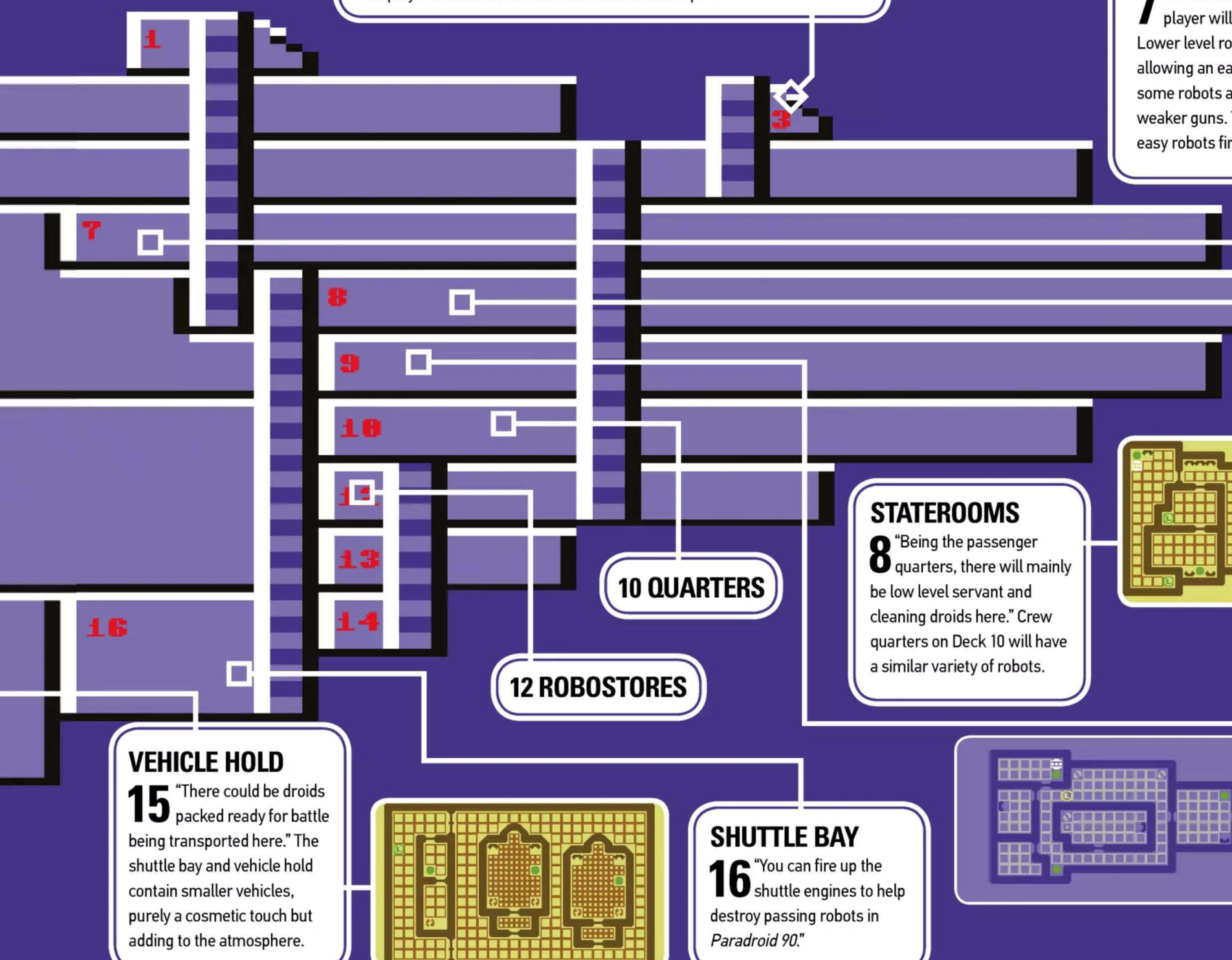
Paradroid 90 became *Paradroid 2000* on the Archimedes. "We just thought it sounded

BRIDGE

3 "There was only ever one 999 and it would always be on the bridge. That gives the player the choice of when to go and tackle the 999 and an opportunity also to decide where they want to take it to use it for maximum effect. The far left-hand lift leads to the reactor and from there the player can access the left-hand side of the ship."

STORES

7 The starting deck is chosen at random, and the player will often find themselves on this deck. Lower level robots help to ease them into the game, allowing an early transfer. "You should also find that some robots are completely unaffected by some weaker guns. That means that blowing away all the easy robots first isn't necessarily a good plan."

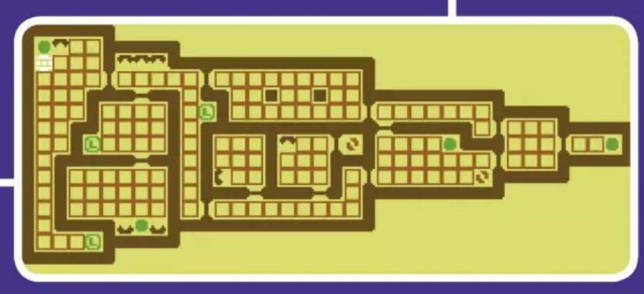


10 QUARTERS

12 ROBOSTORES

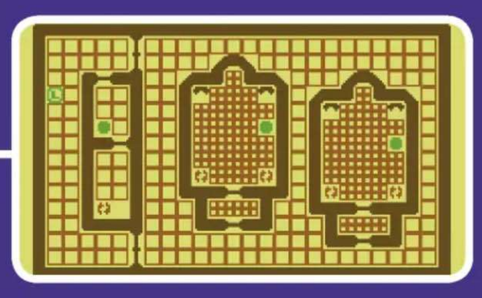
STATEROOMS

8 "Being the passenger quarters, there will mainly be low level servant and cleaning droids here." Crew quarters on Deck 10 will have a similar variety of robots.



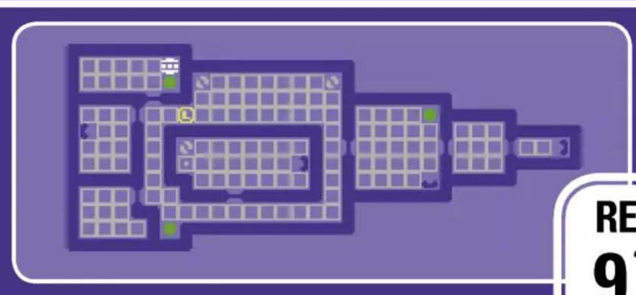
VEHICLE HOLD

15 "There could be droids packed ready for battle being transported here." The shuttle bay and vehicle hold contain smaller vehicles, purely a cosmetic touch but adding to the atmosphere.



SHUTTLE BAY

16 "You can fire up the shuttle engines to help destroy passing robots in *Paradroid 90*."



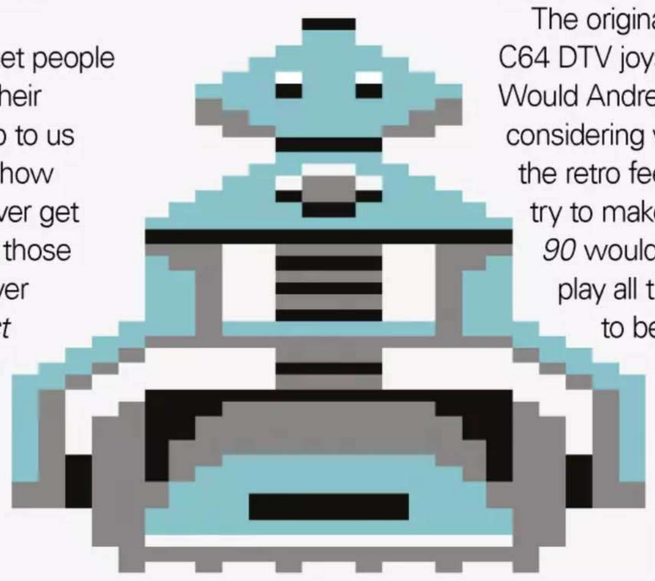
REPAIRS

9 "You could find any robots here being repaired or cleaned."

really futuristic. This was 1991 or 1992 and 2000 seemed a long way away," says Andrew Catling. "My childhood heroes were people like David Braben, Orlando, Geoff Crammond and Andrew Braybrook so it was a dream come true to make games. Coin-Age had a deal with Graftgold to convert their games to the Arc. I'd just finished *The Last Ninja* for Superior Software when they got in touch."

"The 68000 code was adapted from *Rainbow Islands*. I decided I'd rewrite everything from scratch rather than try to translate it. I wasn't familiar with 68000 but I could get the gist of how things worked and how the data for the different droids was used. I was quite pleased with the transfer game, as that was the first time I'd used recursion in ARM assembler and it was quite an elegant solution. It took three months to rewrite the whole thing. I didn't have a lot of graphics work to do as they were just ported from the Amiga." Does he still play *Paradroid*? "Luckily, some amazing archivers have managed to preserve all of my old games, so I've been playing them again recently. I think *Paradroid* still stands out as one of the best, mainly because of the timeless design."

Fans help *Paradroid* live on. "We get people asking if it's okay to do a remake for their university project, and it's not really up to us any more. I don't think people realise how much detail is in a game, so most never get completed," says Braybrook. Among those that were completed were a two-player Amiga PD version and Ovine's *Project Paradroid* on PC. *Paradroid Redux* by Jorma Oskanen is an ongoing C64 project, with a faster frame rate and bug fixes. Andrew notes, "I do hope he's talking about his own bug fixes, because I am not aware of any bugs in my code! The Heavy Metal edition was running at the improved 25 frames per second." Reinhard and Johannes Prix started the open-source Freedroid project, which recently launched on Android.



The original *Paradroid* appeared on the C64 DTV joystick and Wii's Virtual Console. Would Andrew himself ever go back? "I am considering writing something new that retains the retro feel of *Paradroid*. I would probably try to make it a shorter game as *Paradroid 90* would potentially take about 3 hours to play all the way through. It would have to be something new though, maybe the game I would have written without hardware restrictions." We can't wait.

ALIENS

"IT'S COMING RIGHT AT US"

- **PUBLISHER:** ELECTRIC DREAMS
- **RELEASED:** 1987
- **GENRE:** ACTION
- **FEATURED HARDWARE:** C64
- **EXPECT TO PAY:** A FEW QUID

HISTORY

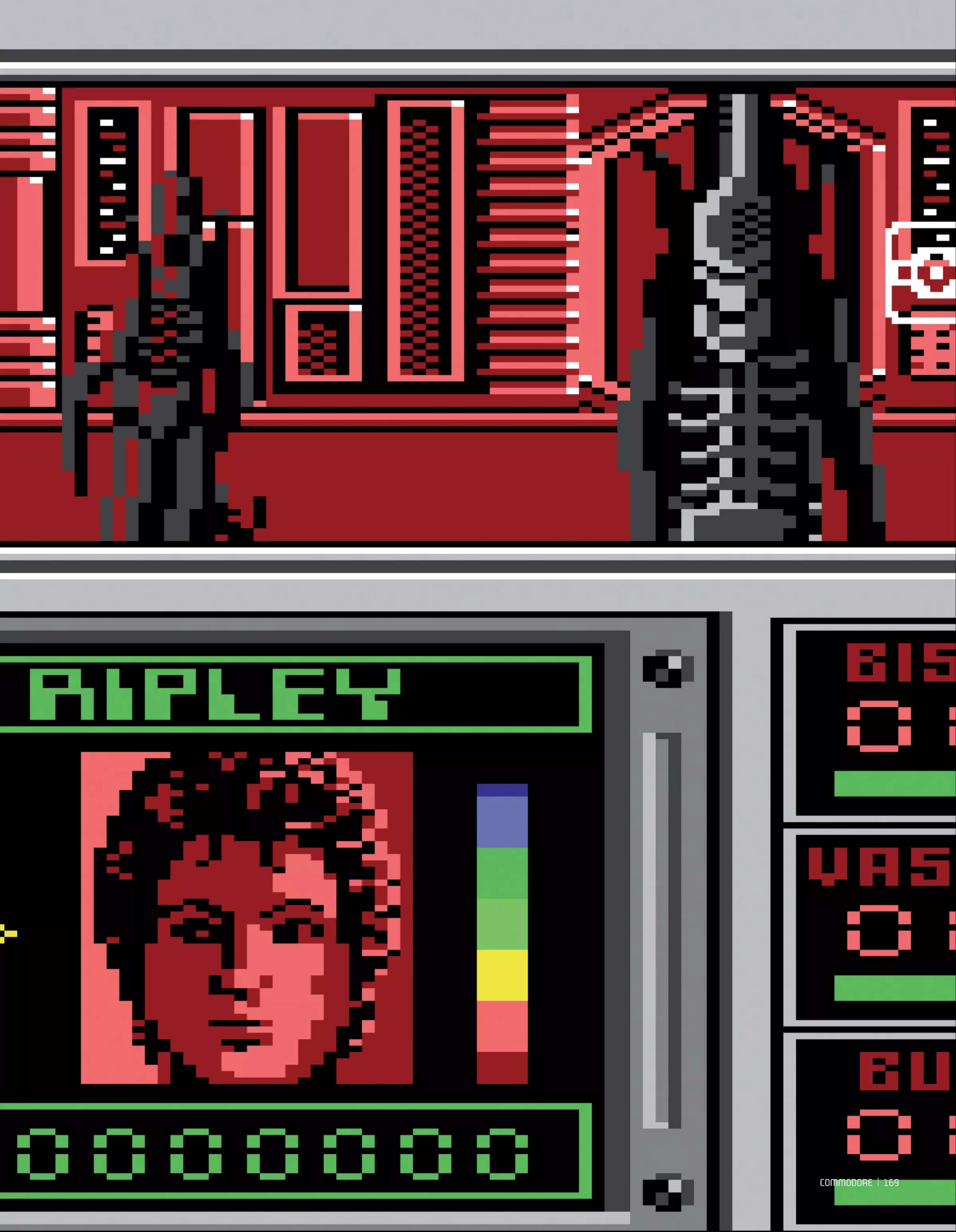
With today's cutting-edge aesthetics, it's hard to ever imagine that we could once get scared senseless by a humble 8-bit computer game. Nevertheless, Electric Dreams' wonderfully chilling adaptation of James Cameron's *Aliens* did just that – and how.

Alright, so the likes of *F.E.A.R.*, *Condemned* and the *Silent Hill* franchise have presented terror in a whole new, far more realistic way, but it's amazing to think that playing *Aliens* was so intense that there was a time when I couldn't even load it up, let alone play it, unless my bedroom lights were on.

Despite being incredible basic to look at, *Aliens* dripped with atmosphere and was quite unlike any movie conversion of the time, and not just because it was so bloody good. The first-person view used in the game perfectly matched the moment in the film when the pumped-up marines start exploring the deserted base and, as the game progressed, it managed to capture all the terror and confusion of the movie in a way few other titles have managed.

Taking control of one of six soldiers, including Ellen Ripley, your aim was to search the narrow corridors of the abandoned base to find out what happened to all its inhabitants. As you made your way through the claustrophobic rooms, your ears were treated to an incredibly eerie soundtrack – all jarring notes and jangling bleeps – that made the hairs on the back of your neck stand up; it made you wish you'd invited a friend to share the fear.

As scary as this initial exploration was, nothing could compare to when you finally tracked down one of your xenomorphic foes. A once slow beep from your scanner would continually rise in pitch and frequency as you drew ever closer to the alien nightmare. Take too long firing or, worse still, miss and the terrifying foe would rapidly move towards you, filling your ears with that painful alarm and your viewing screen with static. It may well be true that "In space no one can hear you scream", but when you're playing *Aliens* on your own it's quite a different matter...


RIPLEY
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BU

“For composing, the Commodore 64 was my first instrument. You could think of sounds that didn't exist and then create them!”

Ben thinks outside the beige breadbin

FAMOUS FOR
SID music

FIRST JOB
Golf caddy

CURRENT JOB
Musician and programmer

FAVOURITE FILM
The Magnificent Seven

FAVOURITE ALBUM
Domino Theory by Weather Report

FIRST COMPUTER
C64

BEST GAMING ACHIEVEMENT
The Trap demo

BESTSELLING GAME
I've no idea!

BEST HOLIDAY
18th birthday party at a campsite in Paris. That was a pretty wicked holiday.

WHO YOU WANT TO BE STRANDED WITH
Saying the wife and kids is too boring, so I'll have Joe Zawinul, the keyboard player for Weather Report. The only man to have played with Miles Davis and the Hitler Youth Group.

ISLAND

145235-46746546546546

SEX
M

NAME
Ben Daglish

DATE OF BIRTH
31 JUL 1966

PLACE OF BIRTH
London

BIOGRAPHY

An accomplished multi-instrumentalist, Ben combined his love of music and maths to produce soundtracks for hundreds of C64 and Amiga games. You can still hear him playing them live with his band Stuck In D'80s.

Ben Daglish

What cherished games would you take to the island?

Ben Daglish provided the soundtrack to your 8-bit youth, creating hundreds of memorable tunes for the Commodore 64. Here he tells Paul Drury about music, mushrooms and making the SID sing

"The inspiration for my music?" muses Ben Daglish, while taking a hard drag from a reflective roll-up. "Does it sound good? You're walking down the street and you go, 'Boo-de-de-boo… Yeah, that sounds cool. What chords is that?' Every time I wander past the piano, I'll play a couple of random chords and…"

Ben jumps out of his seat, sticks the fag in the corner of his mouth, flicks back his hair and bangs his bony fingers down on the keys of the nearby upright piano. "Oooh, that's a nice little sequence," he grins, and he's off into the music of his mind.

To say music is an integral part of Ben's life is somethting of an understatement. The walls of his charming Derbyshire home are adorned with all sorts of weird and wonderful instruments, which he'll often grab nonchalantly and begin strumming, beating or blowing. Our interview is frequently punctuated by him bursting into scat versions of different game tunes, whether the inescapable *Tetris* song or something from his own illustrious back catalogue of videogame music. That's why we're here, of course. Even if you don't recognise the name Ben Daglish, those of you who had a C64 in the Eighties will almost inevitably have blasted, bounced or burrowed to Ben's rhythm.

"For composing on, the Commodore 64 was my first instrument," he smiles. "It was the first time I was able to do stuff that was more than I could purely conceive in my head. I could think of something that I couldn't play… and then play it! You could think of sounds that didn't exist and then create them! You could break out of just what you could do with your fingers. People would ask me back then if the SID chip had been pushed as far as it could go. Well, has the flute? Has the piano?"

For Ben, the trusty 64 was not just a machine to re-interpret tunes; it was a unique musical instrument in itself. The wonderful Sound Interface Device chip inside the beige beast was pulsing with possibilities, and Ben was going to make it sing. Yet his musical upbringing was considerably more traditional. His parents ran a folk club in Ealing and the legendary singer Martin Carthy once bounced Baby Ben on his knee between sets in the mid-Sixties. The family left London while Ben was still in nappies and moved to Stannington near Sheffield. There, among the hills of the Peak District, his mother taught him how to play penny whistle, and his precocious musical talent began to grow. Folk, jazz and classical music was the soundtrack to his childhood, until the intervention of secondary school classmate Diane Mayers.

"She came up to me and said, ''Ere, you play drums, don't you?'," recalls Ben. "My main study was orchestral percussion. So she thrust this Walkman at me and it was playing Led Zeppelin's *Moby Dick* with Jon Bonham's live drum solo. Up to that point I was a short-haired academic little boy into classical music and studying. Six months later I had hair halfway down my back and was hanging out with all the rockers, participating in all those things you did in the Eighties…"

Bless you, Diane, though the influence of another schoolmate would have an even greater bearing on Ben's future direction. In the year above him was one Tony Crowther, a name familiar to Commodore gamers everywhere as the creator of *Blagger*, *Monty Mole* and *Captive*, although at this stage he was still tapping out simple programs on the school's BBC Micro. And that was partly thanks to Ben…

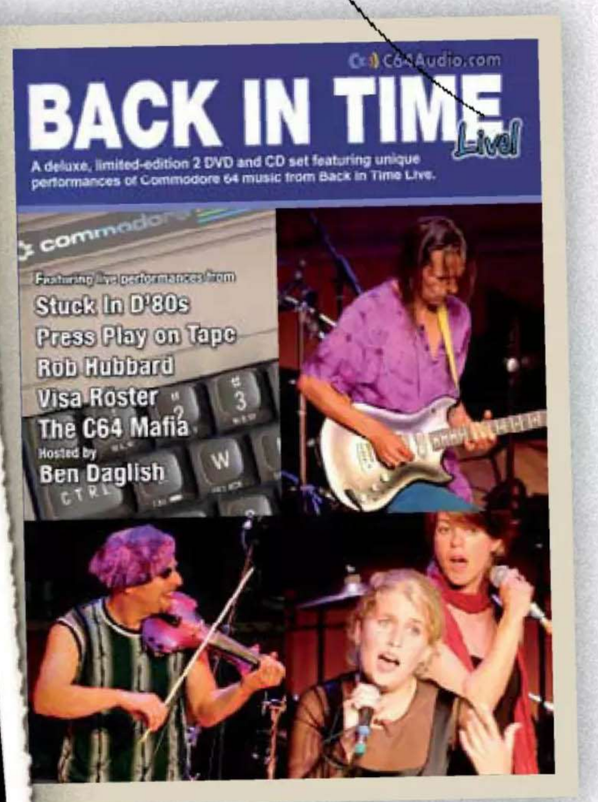
"I won a BBC computer for the school by writing this essay on how computers could be used in schools in the future," explains Ben in a high-pitched geek voice. "I wrote a page and a half of crap and was amazed that a few months later, this 16K BBC Model A arrived. It was the only one in school and they kept it in the library. Because I'd won it, I was allowed to come in at lunchtime and play on it. So was Tony, because the bloke who ran the library knew Tony had already started mucking about with computers…"

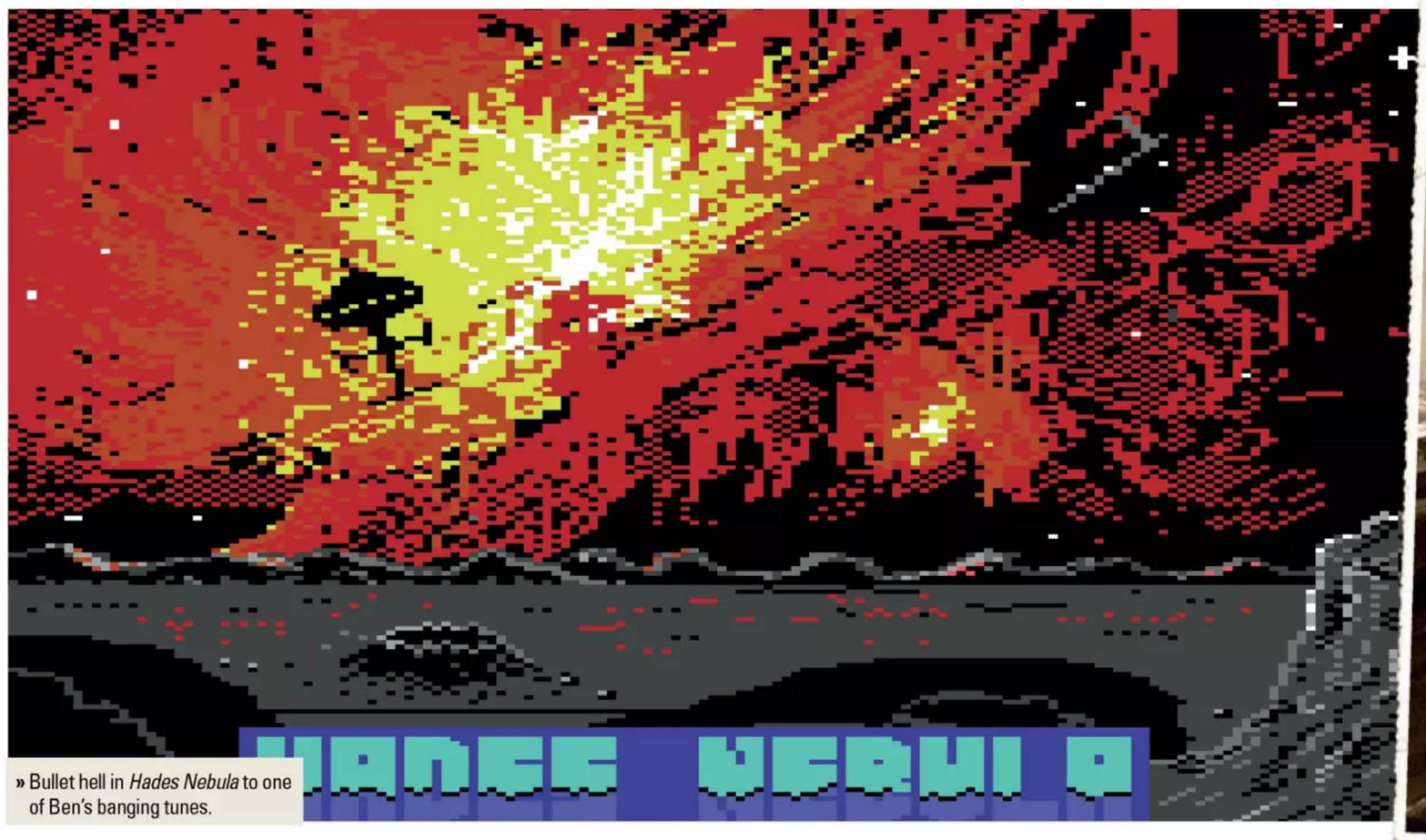
The librarian-cum-software publishing entrepreneur was a chap called Ian Warby, who proceeded to recruit a select crew of schoolboy coders and released their output under the banner of Aztec Games. "We must have done 20-odd titles

Trivia

Ben recently did an interview for the Wii Channel, declaring his love of Impossible Mission on the Virtual Console. Nintendo sent him a Wii for his trouble.

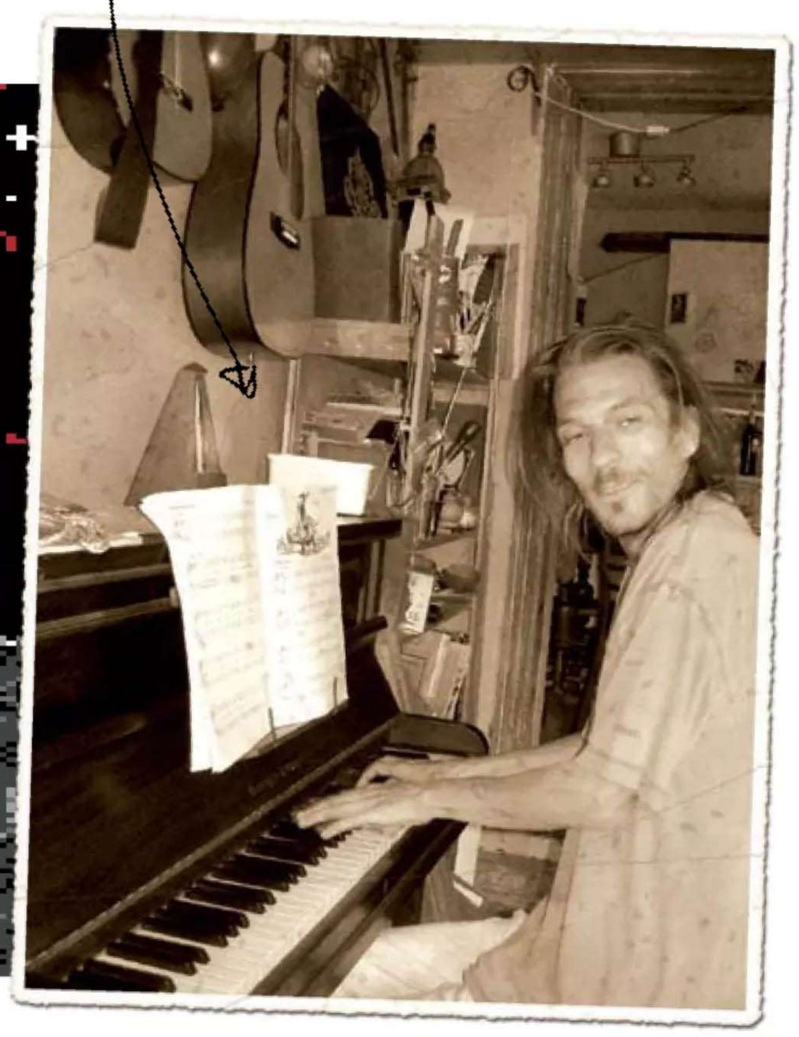
Want to see Ben playing live? Head to www.c64audio.com and get his DVD for £19.95





» Bullet hell in *Hades Nebula* to one of Ben's banging tunes.

Ben in action



If you see SID, tell him...

"Rob Hubbard was the best, obviously," says Ben without hesitation when asked to rate his fellow C64 maestros. "He invented what you could do with the SID. He was always ahead. He was older than us and had toured the world as a keyboardist. He had the musical and the programming ability. I remember when he came to work with me on *Monty*: he had this secret two hours where he put our music together with his driver. There was this thing about 'Rob's driver'. No one saw it or how it worked. He was absolute top and then Martin Galway at number two. He was very good but he didn't really socialise. He only did stuff for Ocean whereas the rest of us were freelance and met up with each other. At one point in the mid-Eighties, Rob, David Whittaker and I were talking about becoming a unified force and setting up a company to do all the game music for every developer in England. Martin said he wasn't interested. He was happy to sit in his concrete bunker in Manchester doing his own thing. I thought he'd got a bit of a problem. I only really got to chat to him properly about four years ago at a Bit Live event and suddenly found out what a lovely, unassuming bloke he is. Oh and getting pissed with Dave was always an education."

For more on the wonderfully vibrant world of SID music, see **www.hvsc.c64.org** for those original tunes and then visit **www.c64audio.com** or **www.remix64.com** to hear clever things people have done with them. Plus look out for an in-depth feature in a forthcoming issue of **Retro Gamer**.

and they sold loads," says Ben. "Almost every school in the country had something from us. We never made any money ourselves, but every six months, Ian would take us all out for a slap-up meal at the local steak house."

This *Beano*-like arrangement may not have delivered immediate rewards beyond a full stomach, but it did give Tony and Ben a taste of the emerging software industry. Thus when Ben dropped out of a degree in maths and computing at Essex University, bored of doing "Noddy little Pascal programs", he discovered that his old mate Tony was producing full commercial releases for Alligata and in need of a little musical assistance.

"Tony asked if I could do him a death march for *Potty Pigeon*," remembers Ben. "Then he wanted Jean Michel Jarre's *Equinoxe 5* for *Loco*. He'd write the driver and I'd type in the notes. I enjoyed doing it but it was when I heard the version of *English Country Garden* on Jeff Minter's *Hover Bovver*, the lovely job they'd done with just three voices, that I thought 'Ooh, you can do interesting stuff with this thing...'"

The boys got busy and after a week of working through the night, fuelled by coffee and Thousand Island dressing sandwiches, they had put together a demo showcasing their efforts. The WEMUSIC sampler – the convenient acronym stands for 'We Make Use of Sound In Computers' – was duly distributed on 5¼-inch floppy disk to various software houses, taken to computer shows and uploaded to the proto-web service Compunet, and very soon the phone started ringing.

"I'd get calls from Gremlin, BT Firebird, Alligata, of course," remembers Ben. "Early on I'd be like, 'Ooh yeah, can I come and see a demo?' I'd go to the office, see the game in development, talk to the programmers. Other times, I'd do it without seeing the game. 'You want generic martial arts music? For the day after tomorrow? There you go...'"

Which reminds us of his work on *The Last Ninja*, particularly the memorable and much-remixed Wastelands theme. The music seems to complement the on-screen action so beautifully that surely he was intimately involved in the game's development?

"No, that was all done on the phone," laughs Ben, "though there was quite a lot of talking, if I recall. Mark Cale [head of System 3] was pretty specific about what he wanted and he wanted a lot. I did half and Anthony [Lees] did half. Mark would say, 'We've got this level and this happens.' I think I saw some graphics too but not a demo and I think I spoke to the programmer John Twiddy, too. The main task after doing the music was integrating Tony's driver code into the game. He'd done a lot of work getting his code as small, as fast and as tight as possible. It was all about raster time; how much CPU time you could take up. I turned up in London with the disks and played around with the programmer for a day getting it to all work. Then Mark turned to me and said, 'So how much do you want for this?' I think I was charging a grand or two. He said, 'I'll give you my BMW.' He had this dodgy left-hand drive he'd brought into the country under dubious circumstances. I later found out that was fairly typical of how he did business..."

Ben wisely decided to take cash instead. Indeed, the readies were rolling in through the second half of the Eighties, with Ben estimating he contributed music and sound effects to over 200 titles, charging anywhere between a hundred and a thousand pounds a time. "An average job would be intro music, tunes for five levels, 30 sound effects and a death tune. I'd do that for £500, which was a week's work

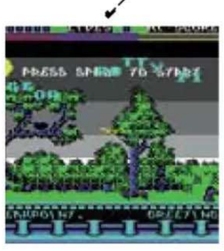
Trivia

Up to the age of 14, Ben's musical tastes were folk, jazz and classical. It was Tony Crowther who introduced him to the joys of Jean Michel Jarre and the Yellow Magic Orchestra.

Timeline

1984

POTTY PIGEON
■ **YEAR:** 1984
■ **VERSION:** C64
Ben's first game music was the death march theme that accompanied your demise in Tony Crowther's feathery take on *Defender*.



1984

LOCO
■ **YEAR:** 1984
■ **VERSION:** C64
This excellent version of Jean Michel Jarre's *Equinoxe 5* first brought Ben's talents to the attention of the games press.

1987

KETTLE
■ **YEAR:** 1987
■ **VERSION:** C64
Ben assures us that this demented take on *Polly Put The Kettle On* was not inspired by any funny mushrooms in the teapot.

1987

THING BOUNCES BACK
■ **YEAR:** 1987
■ **VERSION:** C64
Ben based the music for this sequel on Rob Hubbard's work on the original *Thing On A Spring* and was particularly chuffed to get the boing right.

The Team On Daglish

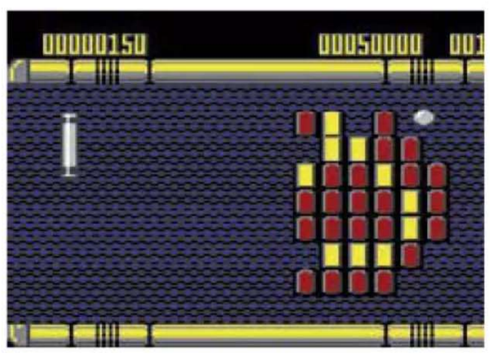
Here's what **Retro Gamer** has to say about Ben's compositions...

Darran Jones

Not owning a C64 when I was a child meant that the only times I heard Ben's work was when I was over a friend's house. That all changed, however, when forum member Markopoloman played a CD of his greatest hits on the way back from the last Retro Fusion event. Even now I can't work out how he made the C64 sing, but I'm glad he did.

Paul Drury

Try playing a game with the sound off. It's just not the same, is it? Growing up as I did with the C64, Ben's work is inextricably linked with so many great gaming memories, yet his musicianship means those tunes stand up on their own merits. And you must witness him playing live. He really does put the 'mentalist' into 'multi-instrumentalist'...



Stuart Hunt

Music in videogames can easily play second fiddle (pun intended) to the glitz of great graphics, but soundtracks play a vital role in helping to create a tangible atmosphere in games. Ben produced music for two of my favourites: *Switchblade* and *Kettle*. And I think Ben's compositions complemented the themes, visuals and gameplay of these games brilliantly.

or sometimes a day's," he grins. "Sound effects were a pain in the arse. Piddly f**king 'booo' – there you go. Then they'd say, 'No, we want it a bit more atmospheric.' Christ..."

Ben grimaces before gurgling through some more of his best spot sounds. He openly acknowledges that he can't remember half the work on his long list of credits, partly because he was never told the name of the game in the first place, but he does recall fondly some of his collaborations with Tony.

"Tony is the most naturally gifted programmer I've ever known, and I've known a lot," he smiles. "*Trap* was the classic one. I saw the game from its conception. We had this idea of putting in the demo at the end. The idea was always to hide it away but then it turned into this ten-minute opus. Possibly it was a shame that it was hidden away but then it was a good reward for finishing the game. *William Wobbler* was another one. That was the first time I did a separate soundtrack for a cassette, using an early Korg synth. An ultra-bouncy tune that went so well with the movement of the character..."

And he's up at the piano again, banging out the jaunty tune and thrusting his chin back and forth like Quagmire from *Family Guy*. Those were heady days indeed and none more so than when he got to collaborate with one of his heroes.

"I was doing the music for *Auf Wiedersehen Monty* for Gremlin and as Rob Hubbard had done the original, they thought it would be nice to have him come in on it too. Rob's just the best and I felt completely unworthy. I had this little office and we just crammed in it and jammed on the keyboards for three days. I don't remember sleeping. Jammed, drank and toked... and magically this piece appeared."

By this stage, Ben had become the in-house music man at Gremlin, lured away from freelancing with the promise of his own studio, an Atari ST and the best musical gadgets 1986 had to offer. He got to work with such talented programmers as Colin '*Fungus The Bogeyman*' Dooley, Shaun Hollingsworth and Pete Harrap, and he talks fondly of his soundtracks for *Federation Of Free Traders*, *Dark Fusion* and *Cobra*.

"We were the Gremlin lads, getting pissed every night at the pub across the road," laughs Ben, "and it was great... for a year. You can tell with the music when it becomes a job, writing stuff by rote rather than being inspired. The company had grown, there was a lot of work and I was handling it all. I was knocking them out. When I was knocking them out ten at night till four in the morning it still felt creative and

> "People would ask me if the SID chip had been pushed as far as it could go. Well, has the flute?"

The C64: the 8-bit that keeps giving...

Daglish on Daglish

We asked Ben to pick his three favourite tunes from his extensive repertoire of game music

■ THE LAST NINJA: THE WASTELANDS

I've always been amazed by the reaction it's had. I think it's because all the bits come together really nicely. I find it heartening that people see the point of the tunes out of context, listening to them not as they're playing the game.

■ TRAP

Because of the orchestration. I got timps, a string section... When Chris [Abbot] arranged it as an orchestral piece, it was a good one! My biggest, hardest, longest piece, as it were. I wrote a nine-voice arrangement and Tony [Crowther] used the joystick ports to synchronise the C64s.

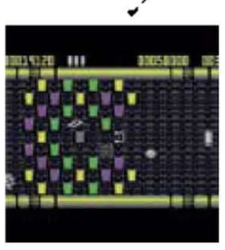
■ DEFLEKTOR

A corking bit of rock with great cowbell. That was the reason it came out as it did. I'd discovered how to do this really good cowbell sound.

There must be a good 20 remixes out there. I love the dub reggae one, and Reyn's [Ouwehand] version with the 'Day Ohs' is beautifully done.

1987

KRAKOUT
■ **YEAR:** 1987
■ **VERSION:** C64
A favourite among the Commodore 64 remix scene. "The live version by Press Play On Tape blew me away," adds Ben.



1989

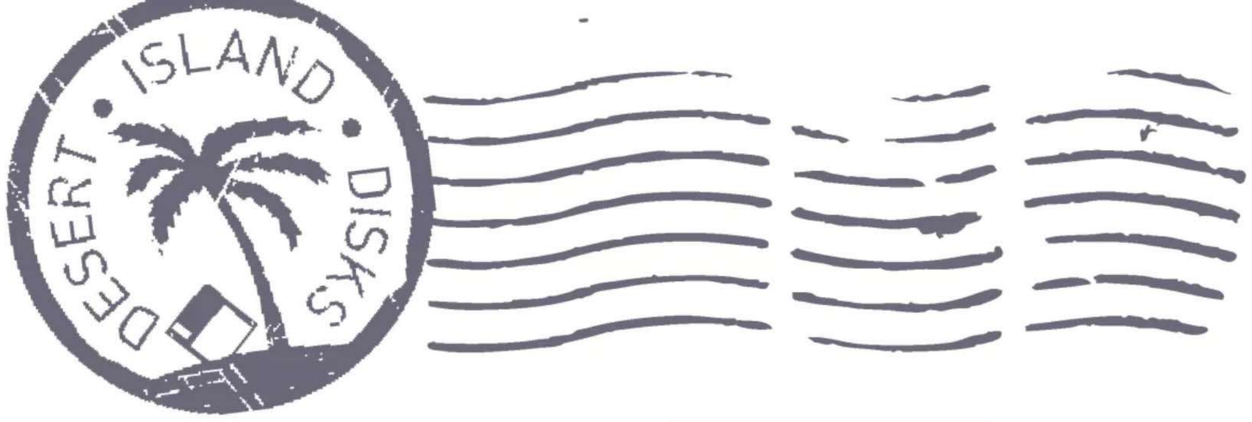
DARK FUSION
■ **YEAR:** 1989
■ **VERSION:** C64
With Ben's pumping soundtrack and graphics by Bernie Drummond, this scrolling shooter was a treat for eyes and ears.

1991

SWITCHBLADE
■ **YEAR:** 1991
■ **VERSION:** C64
One of Ben's final pieces of music for the C64 accompanied this platformer-cum-beat-'em-up from Gremlin Graphics.

1997

TOUCHE
■ **YEAR:** 1997
■ **VERSION:** PC
Ben not only provided the soundtrack to this adventure but also scripted it and devised some of the esoteric puzzles.



Readers' Questions

■ **Drewbar:** For me, The Wastelands from *The Last Ninja* is the peak of C64 music. Where did the inspiration for this sound come from?
From the Orient! [laughs] A famous composer once said it was nothing to do with visual inspiration, like seeing a beautiful sunset or something. Music's a completely separate thing. The inspiration for music is simply 'Does it sound good?'

■ **Necronom:** Which SID tune by someone else is your favourite?
My favourite ever was *Masters Of Magic*, which I thought was Rob. [Ben jumps up and starts playing it] I only learned recently that he'd ripped it off from some American soundtrack composer from the mid-Eighties, which I was most disappointed by. He did a brilliant arrangement anyway.

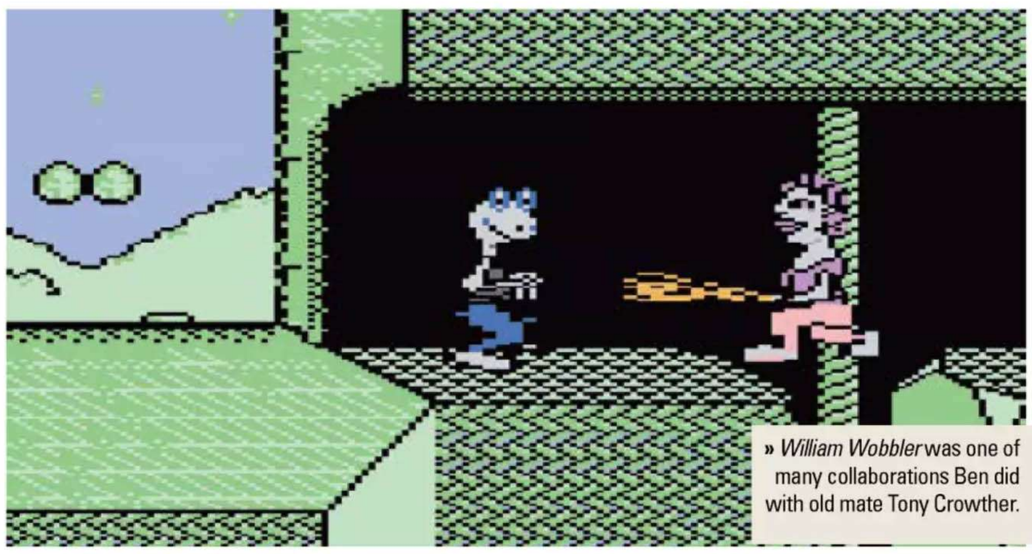
■ **Doddsy:** Do you ever wish some dance act would nick one of your riffs?
F*ck no. Actually a bit of *Last Ninja* got used on a record by DragonForce. He took the guitar solo note for note. I get 20p per album or something. I don't think they sold enough to cover the postage but yeah, they asked our permission. I get lots of people asking me if they can use a bit of my music in things so if a dance act wants to, then fine, but I'm not sitting waiting in hope.

■ **Northway:** Seriously, what did you put in the teapot when you did the music for *Kettle*?
I did do a lot of mushrooms at school but it was just hash in those days. You can't compose when you're tripping out your face. Well, you can and you think it sounds wonderful when it's actually shit. Drugs contribute to my general outlook on life but I've never written better stoned or not stoned. And yeah, I've tried both ways.

■ **DRS:** Have you ever considered going back into programming game music?
As soon as you could stream real music from a CD, that was the end of the programming side of game music. As soon as sampling came in with the Amiga, that's when the rot set in. Actually, I'm currently involved in a project with Jon Hare called Sensible Soundware. We'll be distributing various bits of music we've both done, old and new. Not necessarily just games music but stuff associated with it from our time in the industry.

■ **The Master:** Who is your favourite Doctor Who?
Got to be Tom Baker. That question is really, 'Who was Doctor Who when you were 12?' isn't it? And the best that never was, Brian Blessed!

» *Firelord* benefited hugely from Ben's atmospheric score.



» *William Wobbler* was one of many collaborations Ben did with old mate Tony Crowther.

bohemian, but now it was trying to do it nine to five… I found I was going home at night and not listening to music. Plus I didn't like working in an office. Suddenly, there were all these blokes in suits talking about shipping boxes and they'd no idea what was in the box. It turned into a business and I didn't enjoy it any more."

Feeling his creativity was being stifled and not enjoying the new corporate ethos at Gremlin, he left the company, but he didn't quite leave game development just yet.

"This is hidden history," winks Ben. "There's nothing on the net about this." He lights another roll-up and proceeds to tell us the strange tale of lost arcade game *Septima*.

"A complete chancer called Stuart Firth managed to con a machine from Silicon Graphics, this big projector system off some other company and borrowed money from here, there and everywhere, with this crazy idea to build an arcade game. It had a big semi-circular console with up to seven players shooting guns at a screen the size of this wall. Spaceships were coming out of the screen at you and you had to blast them, like 3D *Space Invaders*, basically. I remember doing the soundtrack in Wales with a studio engineer that used to be in T'Pau. Anyway, we had it running in an arcade in Portsmouth in a cubicle the size of this room for a couple of weeks in about 1988 or '89 and we showed it at a trade show in Blackpool. Sega loved it and wanted to buy it. They bought the prototype from us and some of us went over to Japan for evaluation. Sega said, 'Lovely. We'll have a hundred,' and we thought, 'That's it, our fortune is made!' Then suddenly they said, 'No thanks, we don't want it.' The money they'd paid for the prototype just about paid off our debts, but we had no money to build another one. We were stuffed. Two or three years later I saw a game by one of Sega's subsidiaries: a four or five-player shooting game almost exactly the same. Stuart was trying to get a court case together for ages but it didn't come to anything…"

"We jammed, drank and toked for three days and this piece appeared"

Ben explains how to mix business and pleasure

Thoroughly disillusioned, Ben left games and began doing music for theatre with his partner, Sarah. He briefly rejoined the fold in 1992, working on 16-bit RPG *Legends Of Valour*. This was followed in 1997 by considerable input from Ben and Sarah on witty adventure *Touche* for US Gold. The company was duly impressed and was very interested in an idea he and Sarah pitched for a point-and-click adventure called *Gadzooks!*, set in Elizabethan London, until a buyout by Eidos abruptly ended the project. Ben now earns a crust through numerous musical enterprises and web design work, and thanks to his involvement in the Back in Time events and the marvellous SID'80s, who do stirring live versions of old game music including his own, he is a familiar face at 8-bit musical events.

"When I was writing those tunes, in my head I was writing for a rock band or string quartet and making the best arrangement I could on the C64, so to have them performed by rock bands is great. Playing live to my constituency – 50-year-old folkies and 30-year-old geeks! And I am King Geek!"

We'll see you all down the front at a gig soon, then. All hail to the king…

Ben Daglish's Desert Island Disks

The games that Ben just couldn't live without and why he loves them

01 Master Of The Lamps C64

Top game, great music and I liked the whole concept. A level of flying through the rings and then a level of the genie coming out of his lamp, smoking his bong. The first lot of 14 levels were colours and sounds, the next lot were just the colours and the next just the sounds. I was one of the few people who could complete it because I could remember the sequence of eight notes and play the bubbles like a keyboard.

02 Fable XBOX

I was very impressed watching *Fable*. I didn't play it that much but I watched the kids playing it a lot and it's just beautiful. Did they choose good or evil? Both! They played it through twice and I think they liked being bad most. A great game. Really lovely.

03 Doom PC

We'd all played around with 3D engines but *Doom* was the first that really made you go, 'Woah, this is the future of computer gaming.' And to be honest it still is the future. We haven't really come on a long way since. *Quake*, *Halo*... they're all really *Doom*, aren't they?

04 Planetoids BBC

All those Acornsoft games were spot-on. The *Pac-Man* was great and this *Defender* clone was perfect. Swish, lovely... I spent hours, days, weeks playing this. Stunning. In terms of the accuracy it was a beautiful bit of programming.

05 Day Of The Tentacle PC

I liked all those LucasArts games but *Day Of The Tentacle* in particular. That was the one. Cracking plot and great clues. This is just the ultimate point-and-click adventure.

06 The Sentinel C64

The pillars, the hills, what was it called... ah yes, *The Sentinel*! Killer idea, killer everything. Completely original. I've often talked of the lack of originality in the professional games market. You do get lots of originality on the net with people making their own little Flash games. Bizarre stuff is coming back in!

07 Impossible Mission C64

Always liked this. It's the one I was interviewed about for the Wii Channel. Those lovely running man graphics. The first running person that really looked like he was running before *Prince Of Persia* and stuff came along. The animation just made us go 'Wow!' We could sit and watch him run around for ages. Stay a while, stay forever!

08 Tetris GB

Because it goes ding, ding-ding-ding, ding-ding-ding, ding, ding, ding... for years! One of the few games that even now, ten years later, I can dig out a Game Boy, stick some batteries in, turn it on and I'm right there. I can play it all the way to the end, see the spaceship going off and the guys doing the legs. Yeah, *Tetris*!

RAID OVER MOSCOW

'PLAY IT LIKE THERE'S NO TOMORROW'

- **PUBLISHER:** US GOLD
- **DEVELOPER:** ACCESS
- **RELEASED:** 1984
- **GENRE:** SHOOT-'EM-UP
- **FEATURED HARDWARE:** C64
- **EXPECT TO PAY:** £5

HISTORY

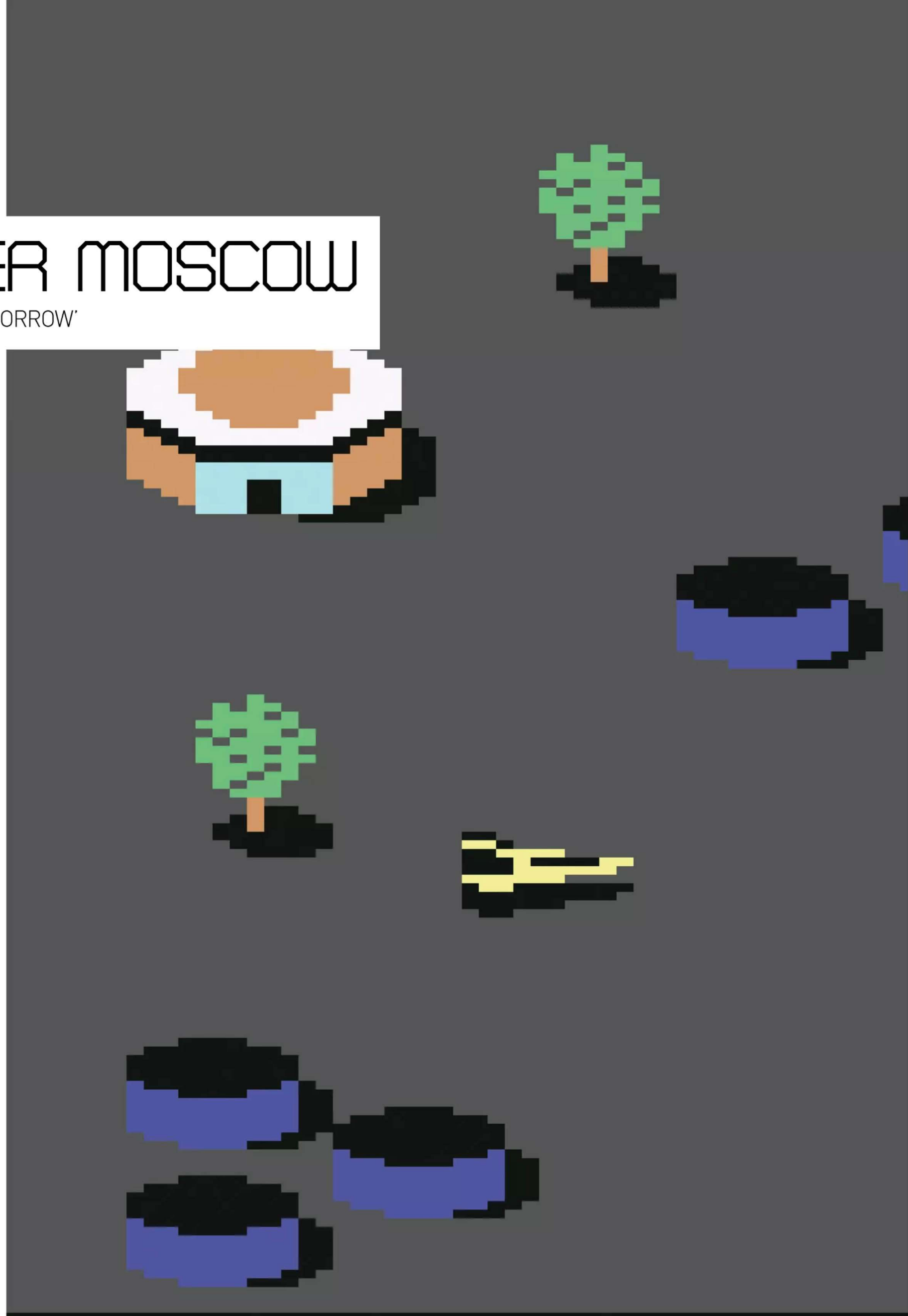
***Raid Over Moscow* was the videogaming equivalent of Hollywood movies such as *War Games* or *Red Dawn*. Released amid Cold War tensions in the early-Eighties, it fed on Western paranoia of a perceived Soviet nuclear threat.**

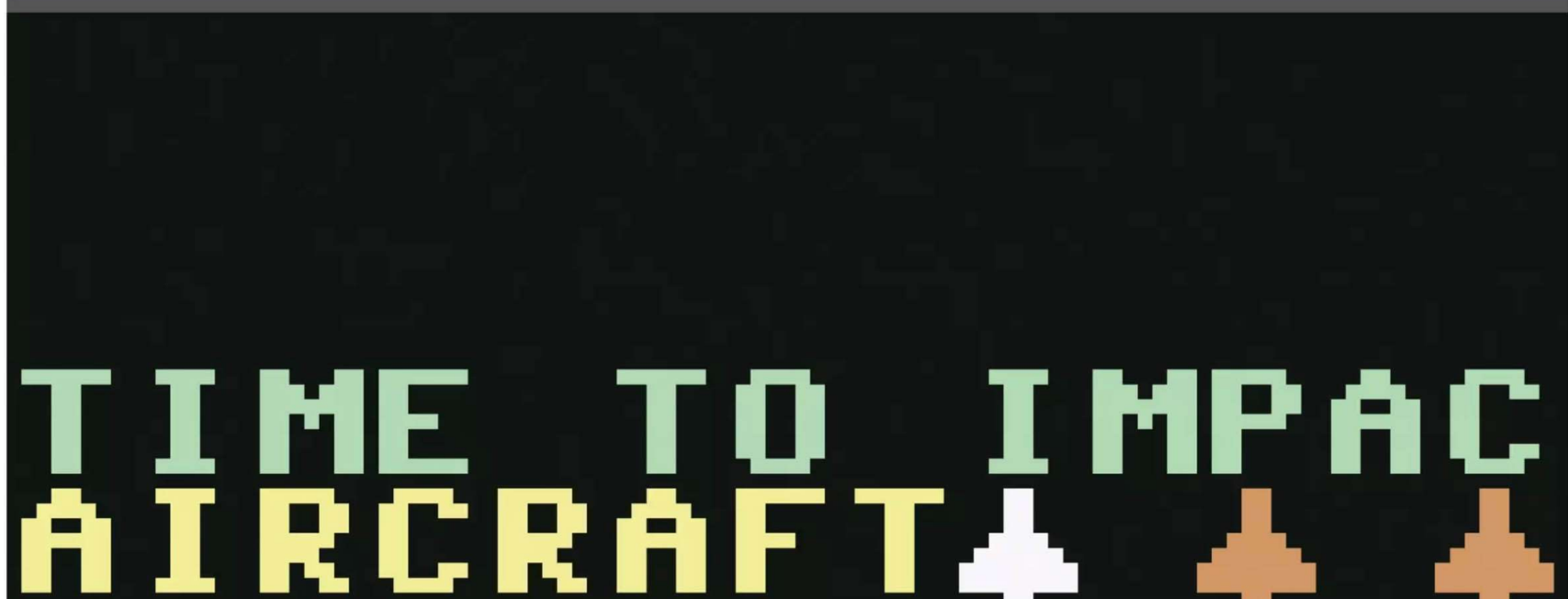
In reality, the Soviet Bloc was already crumbling, and the Cold War was about to end under Gorbachev's leadership and reforms, post-1985. Luckily, the Carver brothers, creators of the huge-selling *Beach Head*, were willing to give us one last chance to defend the freedom of peace-loving Americans everywhere, by travelling to Russia and blowing Moscow to smithereens.

Raid Over Moscow followed a similar path to *Beach Head*, splitting progression into a number of linked sub-games. As a heroic stealth fighter-pilot manning an orbital space station it was your job to prevent Soviet nuclear strikes on a number of major American cities, by blowing up the missile control bunkers on Russian soil.

During the Asteroids-style launch sequence, many a would-be stealth pilot, who hadn't read the instructions revealing that you needed to press F7 in order to open the hangar doors, probably spent forever flying their craft into the staff canteen instead. However, once airborne a *Zaxxon*-like isometric shoot-'em-up sequence led you to the missile silos. After a required number had been destroyed and the US saved from nuclear obliteration it was then onto Moscow for the final showdown.

After blasting your way into the Kremlin, the final stage was a *Discs Of Tron* clone, where you bounced projectiles off a wall into the backs of robots keeping the Kremlin's nuclear facility operational. Success would reward you with the on-screen detonation of the plant, which incidentally seemed to take out about half of the surrounding city. Such is the price of capitalism. *Raid Over Moscow* may well be a Cold War relic, but like all of the Carver's polished products it's still a fascinating game.





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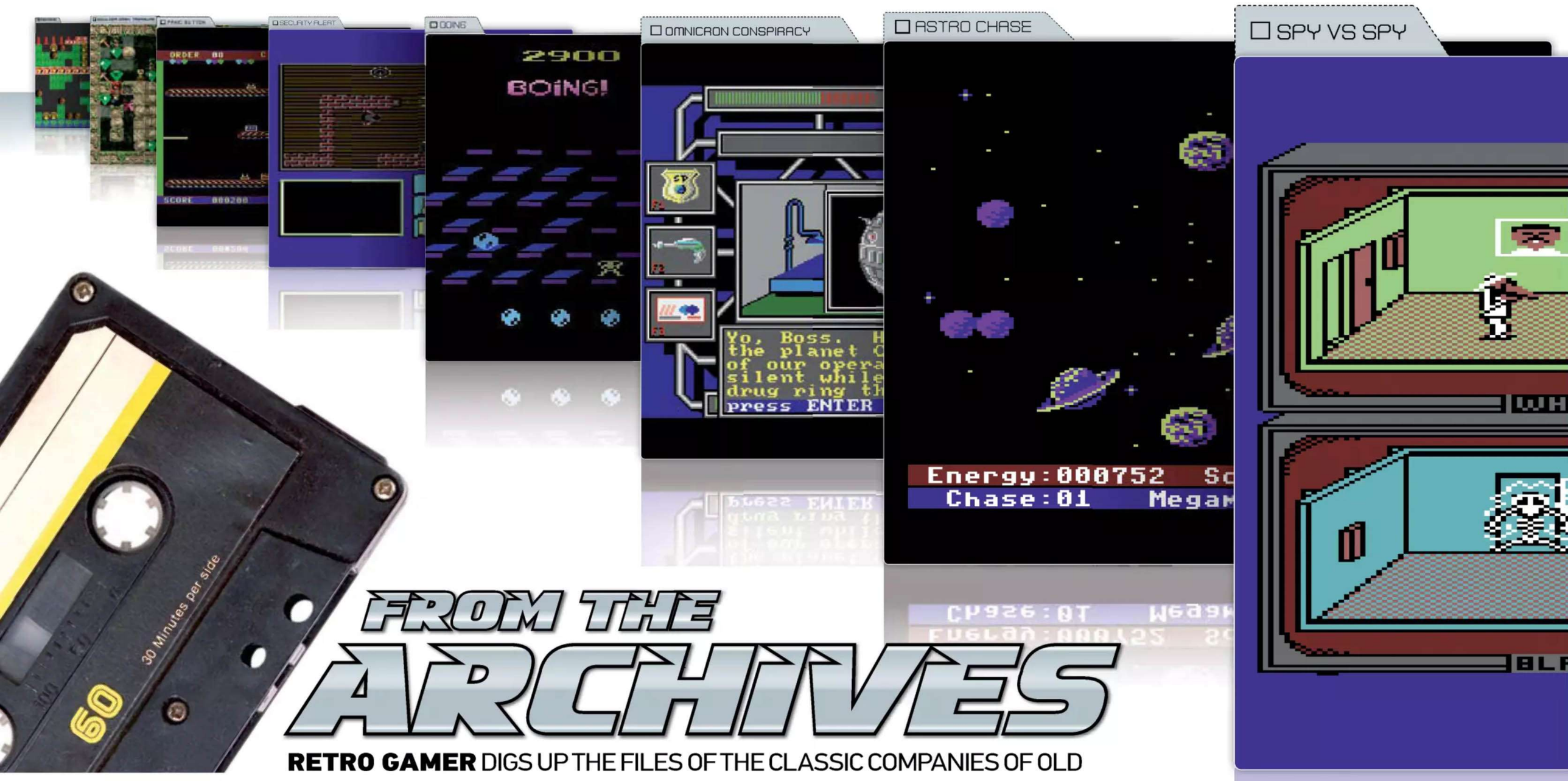


FROM THE ARCHIVES

RETRO GAMER DIGS UP THE FILES OF THE CLASSIC COMPANIES OF OLD

First Star Software

Despite bringing C64 hits Boulder Dash and Spy vs Spy to the world, First Star Software was almost extinguished in the early Nineties. Today, it's muscling its way back in, as Craig Grannell discovers

Two independent film producers running a fledgling videogames company have just turned down a quarter of a million dollars. This, perhaps surprisingly, will prove in the long run to be a shrewd financial decision, and not, as it might seem on the face of it, a crazy one. 1982 is turning out to be quite a year for Richard Spitalny and Billy Blake.

Just a few months earlier, Billy discovered the manager of a computer retail store he co-owned was something of a genius. Fernando Herrera had won a $25,000 prize from Atari for *My First Alphabet*, created to test his two-year-old son's vision after major cataract surgery. The prize's name? The Star Award. Something clicked; Richard and Billy, tired of lengthy movie production cycles and being at the mercy of studios, realised that in six months they could potentially go from a game concept to selling it to consumers – and there were more distribution and production channels for videogames than movies.

Inspired by Fernando's award, the new company was named First Star Software (FSS hereafter). Richard and Billy subsequently, in Richard's words, "left Fernando to do whatever he felt like doing, while Billy and I provided him with the equipment he needed and a salary". The first game Fernando devised was *Astro Chase*, where you pilot a ship around a cordoned-off section of space that's littered with planets, blow up alien craft and try to stop deadly mines from reaching Earth. Although basic and somewhat frustrating to play today, Richard says it caught the eye of the largest single investor in Commodore: "He loved it, and we were immediately offered $25,000 for the C64 rights. Since we were funding FSS and hadn't released the game, I said I needed to go back, speak to Fernando and think about it." Told it was a 'take it or leave it' offer, Richard decided to leave it, and as he headed towards the elevators, the offer suddenly multiplied by ten, which is roughly where we came in.

After protracted negotiations, FSS decided against the deal. *Astro Chase* was self-published and sold 40,000 units, with specific rights sold on to Parker Brothers for $250,000. For the tiny newcomer publisher, this was a major turning point, because it meant Richard and Billy were no longer funding FSS out of their own pockets.

During the following year, FSS began cranking out products for various platforms. *Panic Button*, a game where you assemble products on a multi-level manufacturing line, was designed as a test for a young programmer. Richard recalls: "He'd moved to the USA and was still in school. I gave him the idea for the game, which is based on an *I Love Lucy* routine where Lucy and Ethel are trying to keep up with chocolate candies on a conveyer belt. Since the programmer had a TRS-80 at the time, the game was only initially released for that platform."

Next, the *Q*bert*-like *BOiNG!* became FSS's sole Atari 2600 release. "It was created by a husband and wife team, and was going to come out under a publishing

INSTANT EXPERT

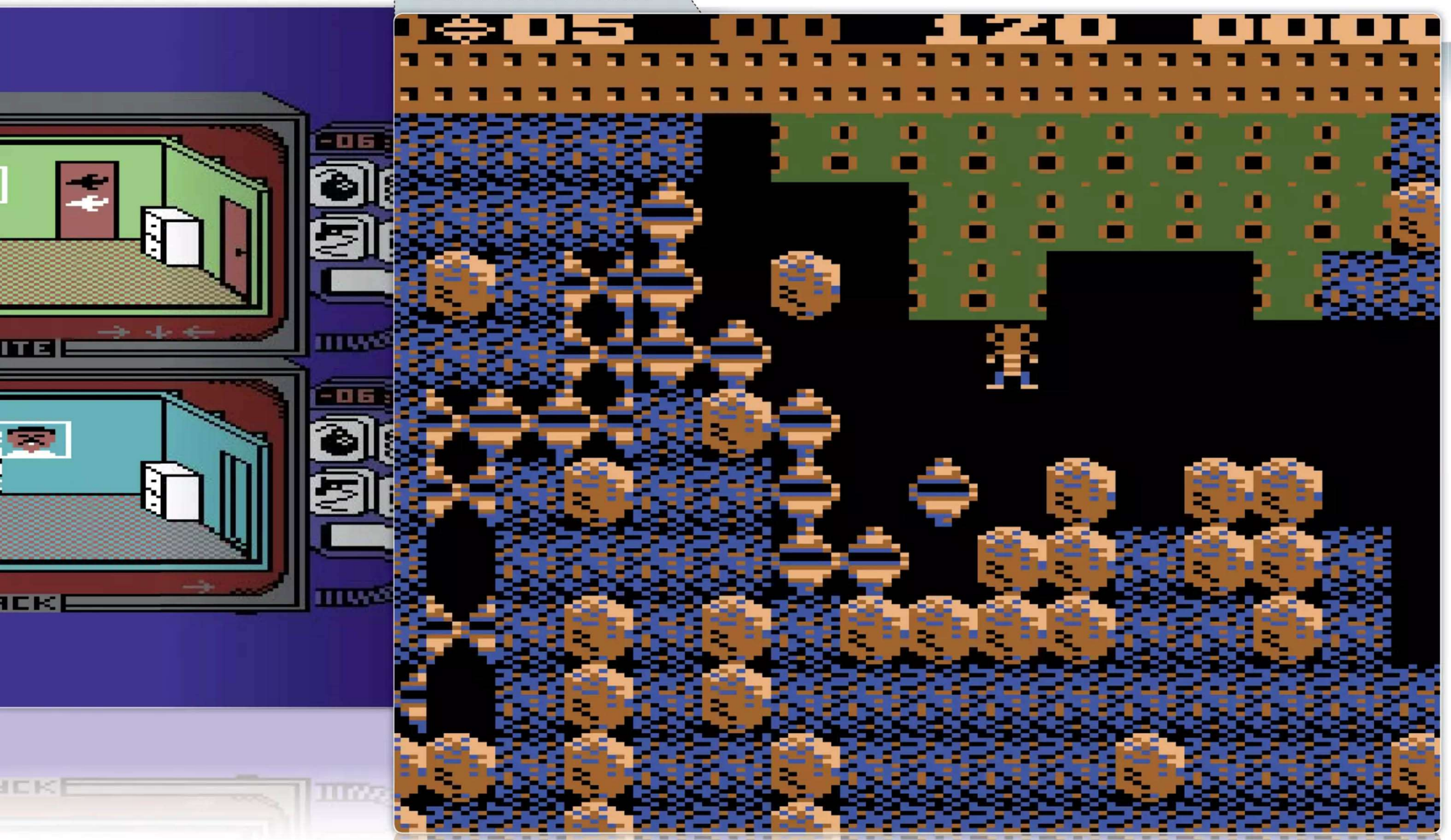
Prior to founding First Star Software, Richard Spitalny and Billy Blake were independent film producers. They liked the idea of working in the games industry because they'd no longer be at the mercy of major film studios.

The first game created by the company was *Astro Chase*, and the last game it created under a traditional development model was *Astro Chase 3D*, over a decade later.

On 28 October, Rockford officially turns 25 – that was the date in 1983 when First Star Software bought all rights to *Boulder Dash* from Peter Liepa. Since then, the game has appeared on almost every major videogaming platform.

When Warner bought half of First Star Software, the games company chose three properties to work on. Of these, *Spy vs Spy* and *Superman* both had three releases, but *Wonder Woman* never got further than being a logo on FSS stationery.

Today, First Star Software mostly makes *Boulder Dash* games for various platforms, and is becoming increasingly interested in download and mobile markets such as XBLA and Apple's App Store for the iPhone.



BOULDER DASH

agreement with Atari, but never did," recalls Richard. "We were working on a version called *Jump*, to tie in with the Van Halen song, but that never happened." Richard says the game was ready for release before *Q*bert* arrived, but various delays meant it didn't appear until 1983. Luckily, no such delays affected Herrera's second FSS title, *Bristles*, a kind of cross between *Elevator Action* and *Pac-Man*.

Monkeying around

The next FSS title initiated a long-standing working relationship with Jim Nangano. *Flip And Flop* somewhat resembles *Q*bert* crossed with Atari's *Road Runner* coin-op and has Flip the kangaroo jumping around isometric platforms to reach marked tiles, while avoiding a zookeeper. When he's done, the viewpoint flips and the level is traversed again by Flop the monkey. Richard recalls Jim was "very talented and a key person at FSS for years," and that *Flip And Flop* was submitted while Jim was in the military: "He worked in a secret facility, tracking the world's nuclear submarines. One time, he asked me to please stop stamping 'CONFIDENTIAL' in red on the disks we were exchanging, because every time he'd enter or leave the military facility, everything he carried was inspected, and it took a long time to prove the disks didn't contain military secrets!"

By this point, FSS had a solid collection of titles, but 28 October 1983 was the date that changed the fate of the company forever: it was the day FSS purchased all rights to *Boulder Dash* from Peter Liepa. "The game was submitted to us before it was completed, and although the graphics weren't great, the gameplay was excellent," remembers Richard, who was taken in by the "mix of 'mental gymnastics' needed to figure out the solutions, in combination with the need for quick reflexes and precise movements."

> **"Boulder Dash is easy to learn, so it appeals to a large cross-section of people"**
>
> RICHARD SPITALNY, FIRST STAR SOFTWARE CO-FOUNDER

Richard recalls all *Boulder Dash*'s gameplay and cave designs came from Peter, with some initial help from Chris Gray, and FSS merely asked for subtle changes, such as the single-screen bonus caves and varied colour palettes. The game subsequently became FSS's bread and butter, and has stood the test of time remarkably well.

"It's easy to learn but tricky to master, which ensures it appeals to a large cross-section of people, and you can return to caves to try different solutions, collect more diamonds and beat your scores," says Richard. He also remembers Peter being a reliable, solid developer: "He never worked for FSS. He was an independent developer doing everything on his own. He designed the games, wrote the code, created his own graphics and music. And while Peter did not 'contribute', if you will, to the company itself, *Boulder Dash* has certainly been a huge part of FSS for the past 25 years; even today, it's our cornerstone."

Continually thinking of ways to expand FSS, two major deals were sealed by the company in the mid-Eighties. The first would prove be short-lived: the coin-op rights to various FSS properties were sold to Exidy, resulting in some rather odd arcade games that were based on modified Atari consoles. More important was the sale of 50 per cent of FSS to Warner, the thinking being that FSS would have access to the American giant's channels, expertise and IP, along

BY THE NUMBERS

3 The number of *Superman* games First Star Software created.

4 The number of official *Boulder Dash* arcade games created to date.

27 The number of years that First Star Software has been in business.

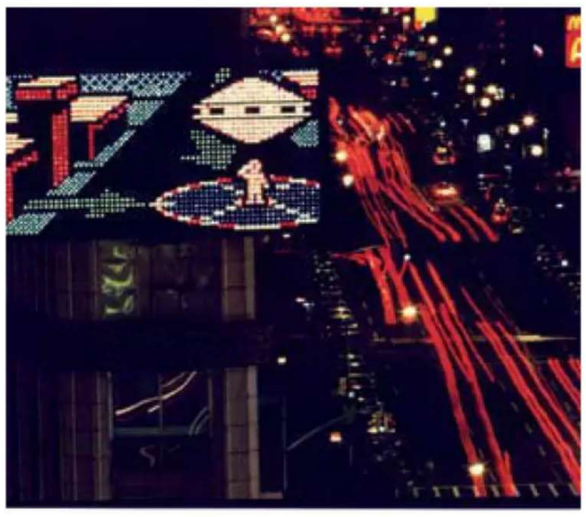
50 The percentage of First Star Software that was, for a time, owned by Warner.

25,000 Fernando Herrera's Star Award prize money from Atari in dollars for *My First Alphabet*, which inspired First Star Software's name.

250,000 How much First Star got for licensing *Astro Chase* to Parker Brothers, ensuring an easier financial ride… for a time.

1,300,000 The sum in dollars a company paid to First Star Software to license rights to *Boulder Dash* and a then-unreleased sequel. The company defaulted after making a hefty initial payment and the rights reverted to FSS.

The flying saucer from *Astro Chase* 'up in lights' at Times Square, New York City, on New Year's Eve 1982.



[Commodore 64] *My First Alphabet* not only netted its creator $25,000, but inspired First Star's formation.

[Commodore 64] *Boulder Dash* was a huge success for First Star Software. This is *Boulder Dash II: Rockford's Revenge*.

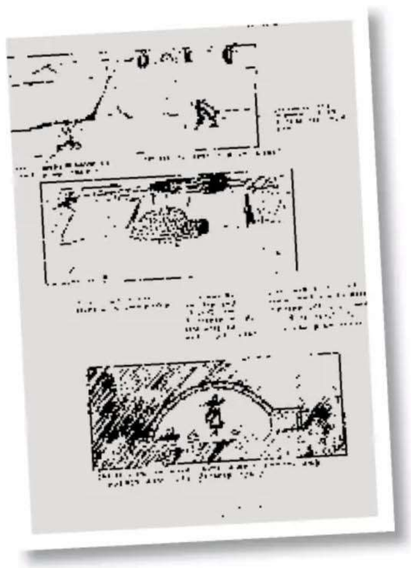
with a large chunk of operating cash.

For a company that, until this time, had concentrated solely on creating original videogames, the shift towards licenses might seem mercenary in nature, but Richard reckons it was merely an obvious direction for FSS to go in: "It's no secret that well-known brands help products stand out from the competition. If you've a good game, people would rather play one that stars characters they know, and often there are back stories or unique features and powers characters possess that can make for an even richer experience."

Spy game

Of the three properties FSS decided to focus on – *Spy vs Spy*, *Superman* and *Wonder Woman* – the two battling cartoon spies from *Mad* magazine surprisingly gave rise to the best-known FSS brand after *Boulder Dash*. "I was very involved with *Spy vs Spy*, and came up with Simulvision, Simulplay and the Trapulator," says Richard. "I made it a requirement of the game that players not have to take turns, and I'd picked *Spy vs Spy* from the Warner properties because I felt, if done right, the 'payoff at the very end' that's in the comic strip could be brought into an interactive game. But, to do that, you couldn't be sitting watching what the other spy was doing – you had to find a way for both players to be active at the same time."

> **"It's no secret that well-known brands help products stand out from the competition"**
> RICHARD SPITALNY



Design documents from the third *Spy vs Spy* game, *Arctic Antics*.

The split-screen dynamic was unusual for the time, but Mike Riedel ably coded the game, enabling each player or a player and computer-controlled spy to act independently, plant traps, and search for game-winning components. The same core gameplay was used with relatively few changes in two 8-bit sequels, and millions of units were sold across the three games in the series, enabling FSS to increase its internal development resources. Most importantly, says Richard, "the tremendous success with *Spy vs Spy* served to add to our credibility. We weren't a 'one-trick pony'."

Sadly, the Warner deal didn't bear further fruit. A *Wonder Woman* game never saw the light of day, and although there were three attempts at a *Superman* game, none of them are memorable for the right reasons. The disastrous C64 effort from 1985 is the worst: a nasty *Pac-Man* clone with dull mini-games, which Richard puts down to the team being over-extended with too many titles in development, along with perhaps too much ambition: "The game was released with design ideas not fully implemented and some interface and control issues that

WHERE ARE THEY NOW?

Richard Spitalny

Co-founder of First Star Software, Richard briefly became involved with digital studio Imergy in the Nineties, working on various interactive titles. However, he returned to what he "knows and does best", and today again runs the company he started.

Billy Blake

Despite co-founding First Star Software, by 1985 Billy had returned to his original loves: movies and photography. He worked on *The Night The Lights Went Out In Georgia*, *Rhinestone*, *The Hunter's Moon* and *Pumpkinhead*, among others. Billy's photography is also regularly exhibited. He's shown at Image Gallery, New York; Universal Gallery, California; The Los Angeles Art Show at the 825 Gallery; the National Juried Photography Exhibition 2007; and the Long Island Museum of American Art.

Fernando Herrera

Creator of *Astro Chase* and the inspiration for First Star's name, Fernando Herrera's credits dry up in the late Eighties, and we couldn't trace him.

Jim Nangano

Jim continued programming videogames into the Nineties, including MicroLeague sports titles. His current whereabouts are unknown.

Peter Liepa

After abruptly quitting the games industry due to its "boom and bust nature, the scarcity of good platforms after the Atari 800 and the lack of a local industry," *Boulder Dash*'s creator became seduced by the 3D computer graphics industry. Peter went on to spend 15 years at Alias/Autodesk, and his work led to nine patents. He currently works with Digital Arts, Inc.

Mike Riedel

After his work with FSS, Mike continued in the games industry and has credits on titles from Hi-Tech Expressions, Ripcord and Running With Scissors, the most famous of which are the *Postal* games, for which Mike was a producer. Since 2004, Mike's moved towards engineering.

SIX OF THE BEST

Boulder Dash [1984]
Although some modern takes on *Boulder Dash* are great, with excellent cave design, Peter Liepa's original remains a standout creation. Its 16 caves, each with five variations, provide plenty of challenge, and the game's so good that it's no wonder ports still thrive on modern platforms. The Atari 8-bit release is still best, though.

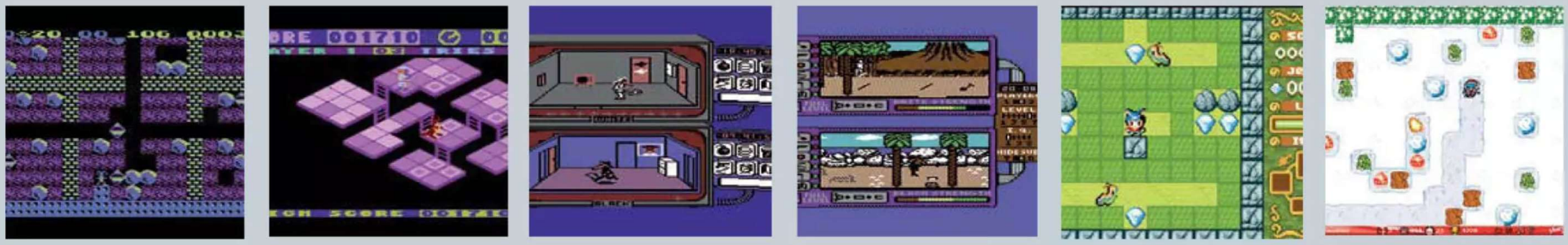
Flip And Flop [1984]
Jim Nangano's oddball collect-'em-up plays like a mix of *Q*bert* and Atari's *Road Runner*. Levels switch between a hopping Flip (a kangaroo) and hanging Flop (a monkey), tasking you with touching marked tiles and avoiding an angry zookeeper. *Clown-O-Mania* on the Amiga borrowed the concept but wasn't nearly as good.

Spy vs Spy [1984]
The original *Spy vs Spy* game is a fantastic example of a split-screen approach, enabling players to play simultaneously. You can set traps for your opponent, but must be watchful of what they're up to. Plenty of humour is evident throughout and, unlike most games based on comics, *Spy vs Spy* lives up to its source material.

Spy vs Spy II: The Island Caper [1985]
Although this sequel has the same core gameplay as its predecessor, there's enough innovation to warrant its inclusion in the best-of list. The graphics are prettier, and the desert island location provides plenty of new traps, including petrol bombs, snares and pits. It's also possible to swim between islands, through shark-infested water.

Boulder Dash EX [2002]
Although playing rather differently to *Boulder Dash – EX* is slower and far more complex – this is a great re-imagining of the 8-bit classic. With more emphasis on puzzles and power-ups, *EX* is taxing and challenging, and although Rockford has been replaced by a manga reject, the game's positive qualities make up for it.

Boulder Dash XMAS 2002 Edition (2002)
Astro Chase or *Security Alert* might have got the nod if it wasn't for this festive-themed *Boulder Dash* effort. The graphics are slightly iffy, but there's no doubting the brilliant design of this game. Its cave designs rival Liepa's originals, and the map structure means that you can bypass stages you can't solve.



negatively impacted gameplay. Also, we tried to include too much in the game, so there were lots of 'ideas' and 'things' but none were done very well."

Sequels to *Spy vs Spy* and *Boulder Dash* kept FSS going well into the Eighties, however. The former series wowed reviewers with *The Island Caper*, stranding the adversaries on a desert island surrounded by shark-infested waters. "We knew that Simulvision, Simulplay and the Trapulator were all well received by players, and so it seemed only logical to build on the success of the first game in the series and to reuse the underlying engine, which would mean we could come to market sooner than with another all-new game or approach," says Richard.

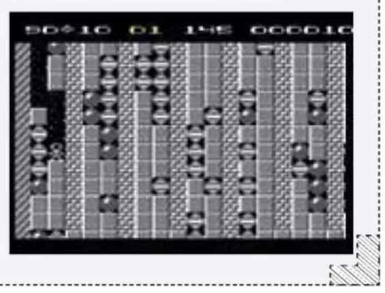
As with *Spy vs Spy*, *Boulder Dash* had several sequels in relatively quick succession. Richard notes that "once you've found something that 'works', the key is to keep adding to the brand, to the experience". Arguably, it took three attempts before *Boulder Dash* fully managed this. First, *Rockford's Revenge*

THE MYSTERY OF BOULDER DASH III

After *Boulder Dash* and *Rockford's Revenge* came *Boulder Dash III*, a markedly different game that disappointed many with its garish, confusing, bas-relief graphics and poorly conceived cave layouts. (It nonetheless Sizzled in *Zzap!64*, suggesting that the reviewers had scoffed a few too many Jelly Babies that day.)

It takes an emailed screen grab for Richard to remember *Boulder Dash III* – he initially confuses the game with *Boulder Dash Construction Kit* – whereupon he reveals why it feels like the odd one out in the original 8-bit series: it's a clone, albeit an 'official' one.

"It was created by a licensee in Sweden: American Action AB. It was an official release, since we were paid for it and approved it, but it was not designed by Peter Liepa nor First Star Software," explains Richard. "As I recall, they came to us with a finished 'clone' and we worked something out to make it official. Proper credits and legal notices were included, and we received an advance against royalties and a continued revenue share, such that the title could come out in the mutually agreed to territories. However, First Star itself never published the game."



provided gamers with a new set of Liepa-designed caves, but little else, and then a bizarre sequel with bas-relief graphics (see: 'The mystery of *Boulder Dash III*') did little more than make people impatient for what they really wanted: the ability to fashion their own caves.

Richard says he recalls designing and building *Boulder Dash Construction Kit* very well: "It was something we'd wanted to do, but at the 'right time', which for us was after *Rockford's Revenge*. We felt that by then there were enough fans who really understood the game inside and out and that they'd enjoy creating and sharing their own caves."

Lots of time was spent making the kit as intuitive and easy to use as possible, and it was released to rave reviews. Of course, it also put paid to any subsequent home *Boulder Dash* games – bar disappointing conversions of *Rockford*, by then the third *Boulder Dash* flirtation with the arcades – and with the third *Spy vs Spy* game being a letdown, FSS's blazing light was for the first time starting to dim.

The road to nowhere

The last few years of the Eighties were a turbulent time for the company, which had previously enjoyed almost constant success. Things began to unravel with the ambitious *Omnicron Conspiracy*, a science-fiction graphical adventure game for 16-bit platforms, somewhat along the same lines as LucasArts productions. Around the same time, FSS worked on two other original titles: one-on-one fighting game *Millenium Warriors* and the noteworthy, innovative *Security Alert*, which has you breaking into various establishments, using both side-on and overhead viewpoints to defeat security

systems and grab your prize.

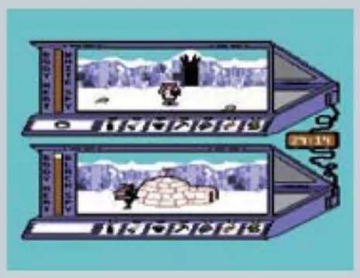
"All three of these games included groundbreaking elements, both in terms of unique gameplay and story, but unfortunately they were created as we were leaving publishing, in an attempt to focus solely on development," says Richard. "The problem ended up being that both Epyx – for *Omnicron Conspiracy* – and Intracorp – for *Security Alert* – were themselves, struggling as publishers." The original agreement with Epyx was to deliver *Omnicron Conspiracy*, *Spy vs Spy: Arctic Antics* and *Boulder Dash Construction Kit* across numerous platforms, which FSS had never done before for a publisher – the company had previously self-published or licensed platform rights to a third-party that handled the ports. "As it turned out, due to the inevitable submission-review-revise-resubmit-review and approval process between developer and publisher, in this particular case due to shortcomings at both FSS and Epyx, we pretty much got eaten up alive," recalls Richard, sadly. "By that I mean that the time

Such was his popularity, Rockford appeared in issues of Zzap!64.

THREE TO AVOID

Superman [1985]

Plenty of ambition doesn't necessarily make for a great game, as this first crack at *Superman* proves. A quick read of the manual suggests there's plenty to do, but when you load the game, you find a collection of dull mini-games with unresponsive controls, sparse sound effects and uninspiring graphics. Tynesoft's later attempt is better, although still no classic.



Spy vs Spy III: Arctic Antics [1986]

The previous two *Spy* games are still great fun, but even in 1986 *Arctic Antics* proved a game too far. The third *Spy vs Spy* instalment lacks the visual appeal of *The Island Caper*, and its gameplay seems less finely tuned. It's not a disaster, but there's little point playing it over its predecessors.

Millenium Warriors [1989]

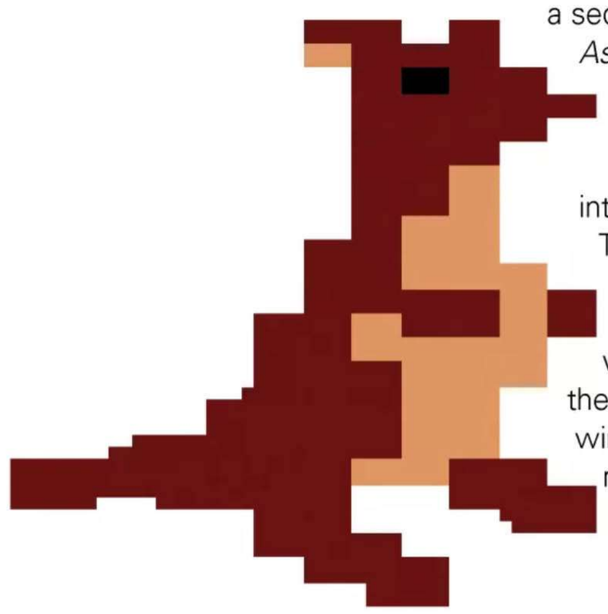
More a missed opportunity than the worst game in the world, *Millenium Warriors* has a decent idea behind it, tasking you with one-on-one battles in various eras. Caveman brawls, pirate swordfights and futuristic laser-gun fights look nice, but one-on-one fighting games live or die by their controls; *Millenium Warriors* sadly proves awkward, and therefore isn't much fun.

and money we expended in developing all of these SKUs was much more than we earned from royalties, advances and sales combined."

In a relatively short space of time, FSS went from a solid, profitable company to one that barely existed. The sales department had previously been closed, as FSS segued from development and publishing to development-only, but now the development department closed its doors as well, with the exception of Fernando Herrera, who completed *Security Alert* for the C64 on his own.

Just one more game arrived from FSS under a traditional development model – a reworked, technically groundbreaking take on its very first release. "*Millenium Warriors* for C64 wasn't released until it was included as part of *First Star Software's Greatest Hits*, but it was the first project we worked on with Ofer Alon, and he went on to co-create the Software Accelerated Graphics Engine (SAGE), which served as the engine for *Astro Chase 3D* on the Mac," says Richard.

> **"I made it a requirement of Spy vs Spy that players not have to take turns"**
> RICHARD SPITALNY



Chances are, few people reading this article will be aware that *Astro Chase* had a sequel, but in its target market, *Astro Chase 3D* reviewed just as well as its forebear. The game takes the original's core gameplay and turns it into a fast-paced 3D shooter. The unique rendering engine wowed Mac users at the time – some noting how, while ageing systems played the likes of *Doom II* in a box-like window, *Astro Chase 3D* happily ran flawlessly at twice the screen resolution – and the mouse-based control system proved fluid and intuitive. Despite this sole very successful release and a plethora of positive reviews, along with the underlying SAGE engine working brilliantly well, further games didn't appear. "We unfortunately were not able to come to terms internally with Ofer as how best to exploit the engine," says Richard. "We had lots of significant interest from some very large companies, but they were only interested if we would port SAGE to the PC and Ofer felt strongly that we should stay with the Mac. Ultimately we ended that partnership."

For a while, it seemed like FSS's doors would have to remain forever shut. Although Billy Blake had departed, Richard had stuck with the company, but by 1995 even he'd had enough: "There was a period where I got involved with another company – a digital studio, as they were called in the 'dotcom' days. I personally needed to recharge my batteries – they'd been badly drained by the time, money and effort invested in SAGE, ultimately, all for naught."

TIMELINE

1982 – AN INVESTOR OFFERS $250,000 FOR C64 *ASTRO CHASE* RIGHTS. RICHARD SPITALNY AND BILLY BLAKE REJECT THE DEAL AND FOUND FIRST STAR SOFTWARE (FSS) TO CREATE AND PUBLISH THEIR OWN VIDEOGAMES.

1983 – $250,000 DEAL SIGNED WITH PARKER BROTHERS FOR ATARI AND COLECO *ASTRO CHASE* RIGHTS. *BOULDER DASH* RIGHTS PURCHASED FROM PETER LIEPA.

1984 – COIN-OP RIGHTS TO FSS GAMES LICENSED TO EXIDY. *BOULDER DASH* RIGHTS LICENSED TO MICROLAB FOR $1.3M, WHICH SUBSEQUENTLY DEFAULTS. FIRST *SPY VS SPY* GAME RELEASED.

1989 – AGREEMENT WITH EPYX FORGED TO DELIVER GAMES ACROSS VARIOUS PLATFORMS. SHORTCOMINGS AT BOTH COMPANIES CAUSE PROBLEMS, LEADING TO *OMNICRON CONSPIRACY* BEING THE LAST GAME DEVELOPED BY THE FSS TEAM. FSS CLOSES ITS DEVELOPMENT DEPARTMENT.

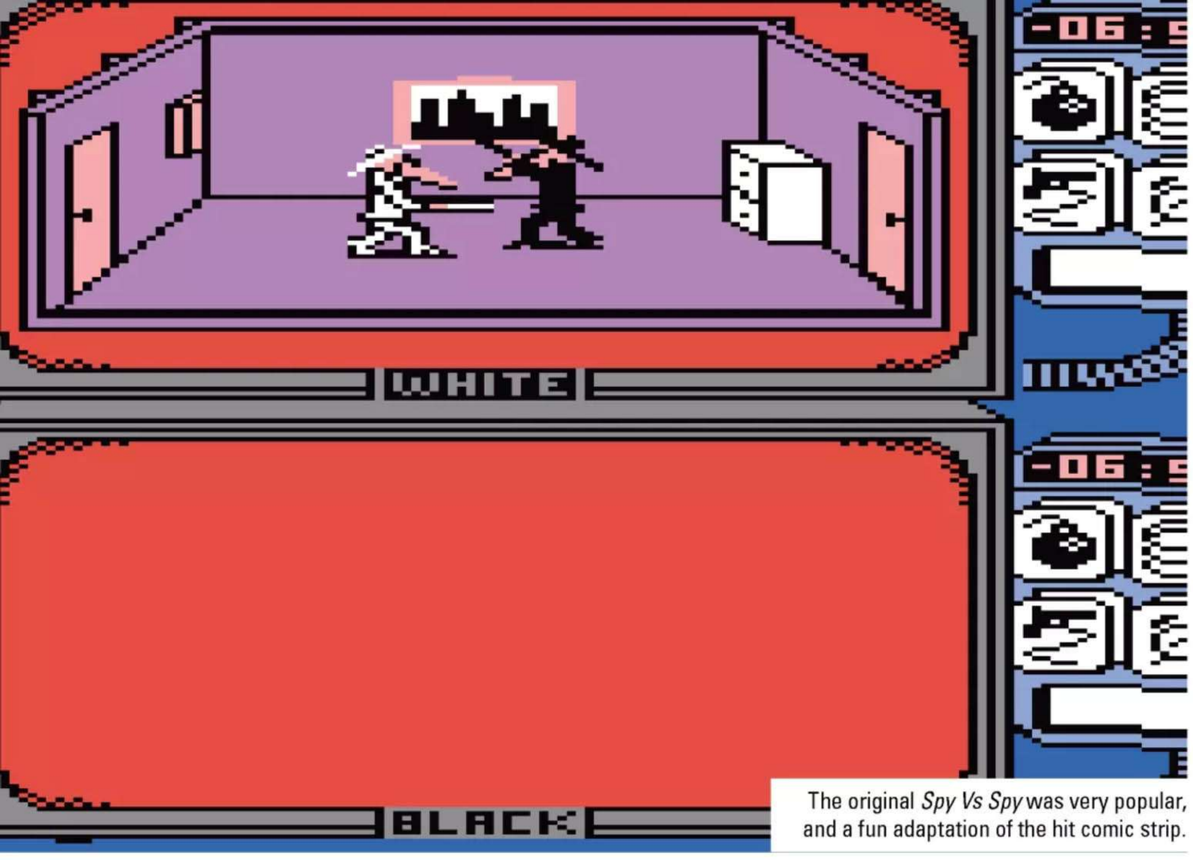
1993 – *ASTRO CHASE 3D* PREVIEWED FOR THE MAC AT SUMMER CES. IT SHIPS THE FOLLOWING YEAR, THE LAST GAME FSS PRODUCES UNDER THE TRADITIONAL DEVELOPMENT MODEL.

2001 – JAVA-ENABLED *BOULDER DASH* SHIPS IN JAPAN, BEGINNING FSS'S RESURGENCE.

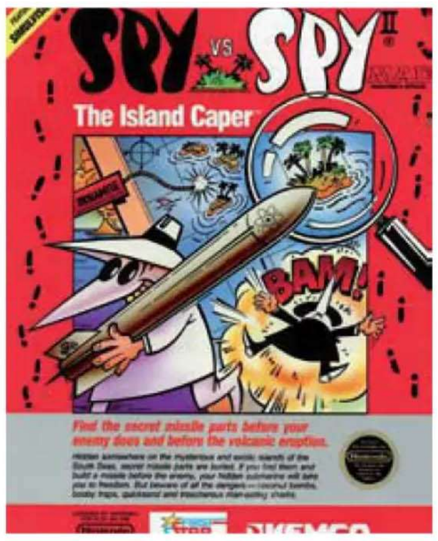
2003 – FSS SHIPS FIRST ONLINE/TRY-AND-BUY TITLE, *BOULDER DASH TREASURE PLEASURE*, AND ITS FIRST CELL PHONE TITLE, *BOULDER DASH ME*.

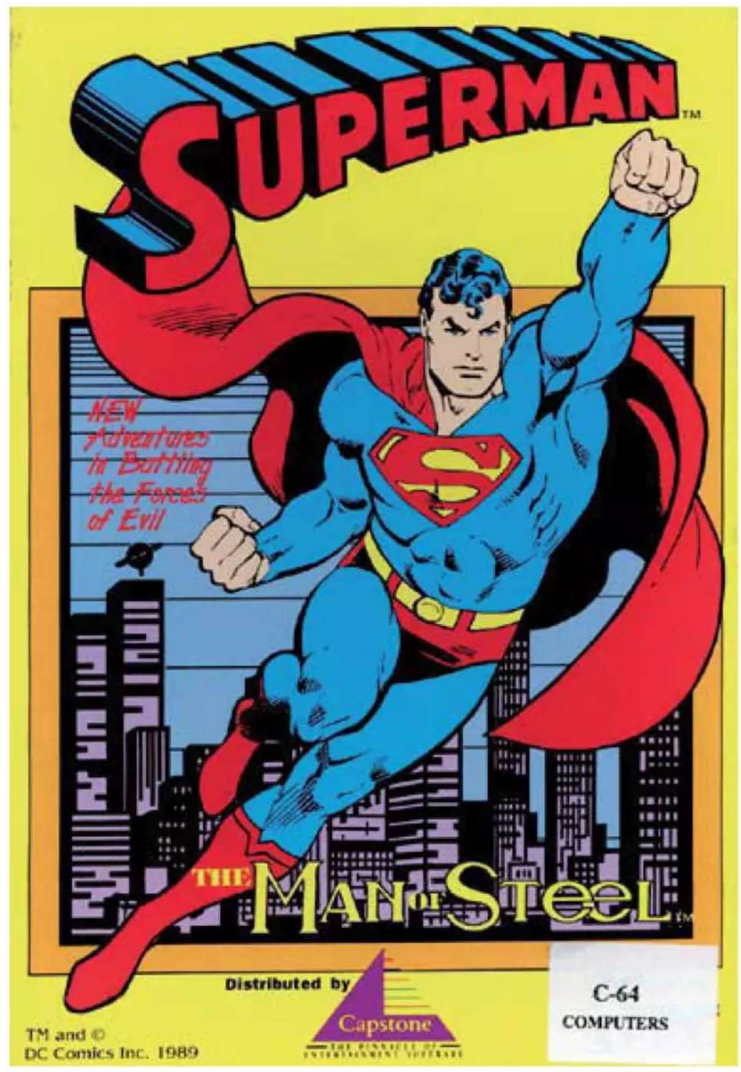
2007 – *BOULDER DASH ROCKS!* RELEASED FOR THE NINTENDO DS.

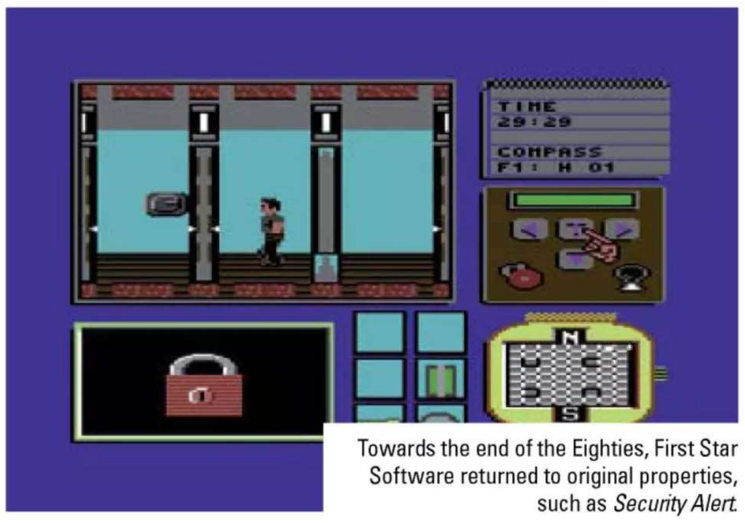
2009 – *BOULDER DASH* 25TH ANNIVERSARY RESULTS IN VARIOUS RELEASES, INCLUDING ORIGINAL *BOULDER DASH* AND *BOULDER DASH ROCKS!* FOR THE iPHONE, AND RELEASES OF *ROCKS!* FOR BLACKBERRY, WINDOWS MOBILE, J2ME AND BREW, AND *BOULDER DASH PIRATE'S QUEST* FOR THE PC AND MAC.



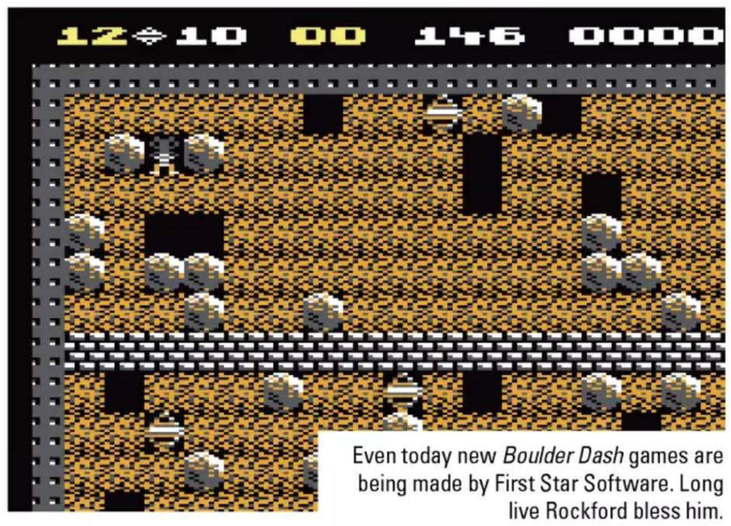
The original *Spy Vs Spy* was very popular, and a fun adaptation of the hit comic strip.







Towards the end of the Eighties, First Star Software returned to original properties, such as *Security Alert*.



Even today new *Boulder Dash* games are being made by First Star Software. Long live Rockford bless him.

During this time, Richard was minority owner and senior/executive VP product development for Imergy, a company that did several *Star Trek* interactive titles for Simon & Schuster, such as *Star Trek Omnipedia*, *Star Trek: The Next Generation Interactive Technical Manual*, and *Star Trek: Captain's Chair*, along with an interactive CD-ROM based on *The Joy Of Cooking*, and various extranet sites for companies such as GE and Clairol.

But gaming was in Richard's blood, and it wasn't long before he was drawn back into the industry.

The comeback kid

After almost a decade of laying dormant, FSS sparked back to life. The re-emergence was driven by long-standing Japanese partner Kemco wanting to develop the original *Boulder Dash* for phones in Japan. When this proved successful, the more ambitious *Boulder Dash EX* was created for the Game Boy Advance, offering extended gameplay, including a multiplayer battle mode and the ability to rotate the screen. "Although the game didn't do as well as it could have, *Boulder Dash EX* convinced me *Boulder Dash* could be updated while remaining true to the game's core principles and appeal," says Richard.

Although new *Boulder Dash* features are divisive, Richard thinks they work nicely if you approach the games with an open mind; he cites slower boulder drops and a 'Zen' mode that removes the timer, enabling players to amble about caves at leisure to figure out solutions. And with this new *Boulder Dash* arsenal, there's been no stopping a reinvigorated FSS. Since 2002, we've seen numerous games based around the property, including the impressive *XMAS 2002* edition for the PC and the pretty *Boulder Dash Rocks!* for various handheld systems.

Major changes to FSS's most famous property have been echoed in the company itself. These days, it only develops games with full development partners. "We do not pay royalty advances. All development is handled and financed by the developer," explains Richard. "We provide the IP, game design documents and a [producer] for the project. The developer is responsible for code, art, music, QA, and so on. We then arrange for distribution or co-publish with a strong partner for a given platform, and we share royalties on a 50/50 basis."

For FSS, this streamlined approach provides the opportunity to compete on a level playing field with industry giants. Online try-and-buy, Flash games via DotEmu's EasyRetro portal – currently *Boulder Dash: Arcade*, but soon also *Astro Chase*, *Bristles* and *Flip And Flop* – and download networks and mobile platforms have proved fruitful for FSS, reducing inventory risks, marketing expenses and time to market. The original *Boulder Dash* is on Virtual Console, and Richard is aiming to see Rockford infiltrate XBLA, DSiWare and PSP Go. This reliance on digital distribution also, perhaps inevitably, resulted in games for the iPhone, with the original *Boulder Dash* and a tweaked *Boulder Dash Rocks!* on the App Store.

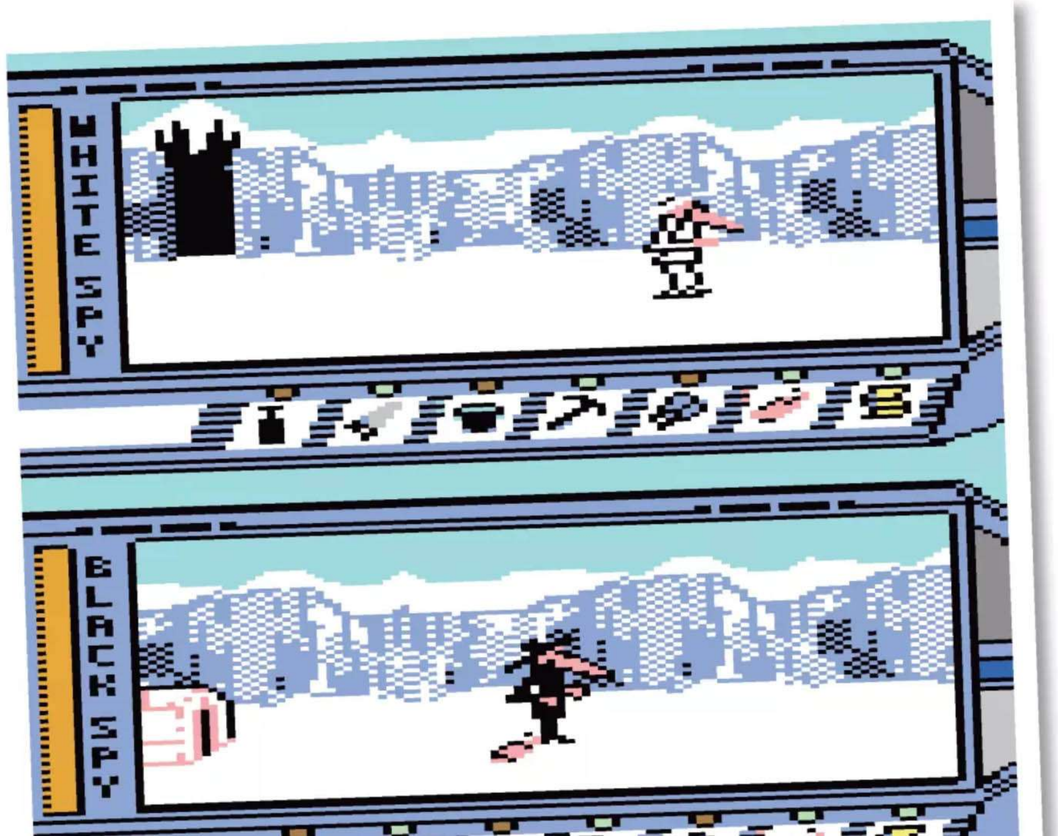
Despite all this new technology, Richard remains very aware that his company began in 1982 and now spends an awful lot of time reworking a 25-year-old game. "But I find the increased interest in retro gaming very interesting," he says. "I think it says something about the fact that while we enjoy 3D graphics, extreme realism and huge, alternate worlds, we still crave games that are easy to get into and that can be played in short sessions."

We ask how hard it is to snare new gamers with old properties, without annoying those who loved them when they first appeared. "That's an interesting question, and we had our heads handed to us by our most die-hard fans when we previewed *Boulder Dash* for iPod," laughs Richard. "Our intention was to release the game with its original caves but updated graphics. Well, let me tell you, when those screenshots came out, the forums lit up, letting us know, in no uncertain terms, that this would not stand!" In the end, a retro mode eventually became the default.

Much of FSS's future depends on the success of its Flash and iPod games, along with upcoming productions for XBLA. But Richard says FSS's prospects aren't entirely reliant on the past: "We do have one or two new game ideas that we're playing with, which, if they come to fruition, will be the first all-new games from us in many, many years!"

THE CHANGING FACE OF BOULDER DASH

From cave-mite to miner to strange cat-like thing, the appearance of *Boulder Dash*'s protagonist has changed more often than Madonna's – surprising for First Star's 'mascot'. "We love the original Rockford," affirms Richard, "but over the past 25 years, it seemed like a good idea to have him evolve as technology improved and expectations for in-game graphics increased. Also, with *Boulder Dash* appealing to female players, we introduced Crystal – Rockford's sister – which appears successful when noting the number of Crystal 'avatars' for *Treasure Pleasure* and *Pirate's Quest* online high-score tables."



64 The Collector's Guide

COMMO

Commodore's 8-bit computer is more popular than ever and highly collectible. The following guide reveals the best it has to offer

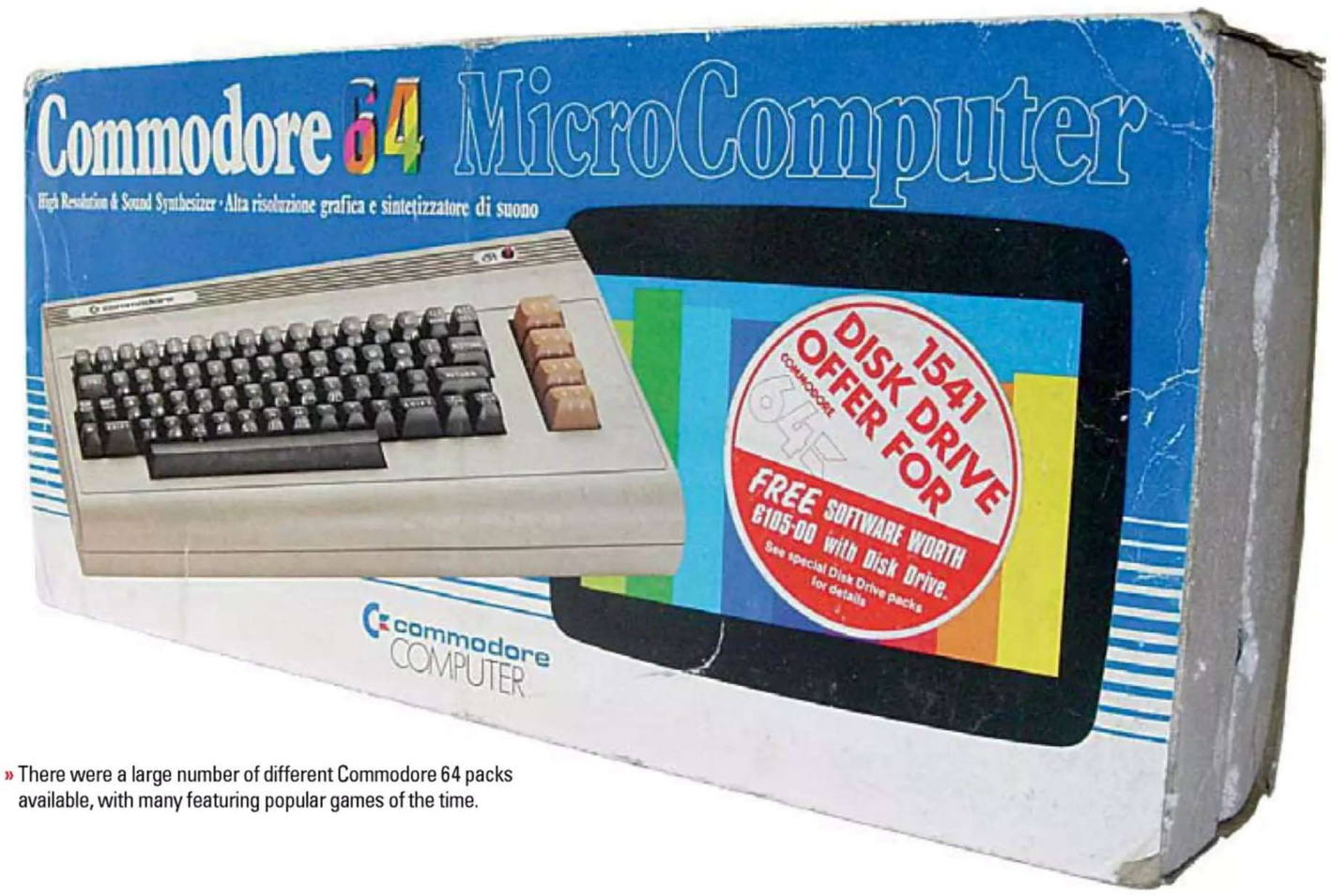
» **Manufacturer:** Commodore » **Model:** Commodore 64 » **Launched:** 1982 » **Country of Origin:** USA

DORE 64

64 The Collector's Guide

» Commodore obviously liked the aesthetics of the Amiga as it eventually placed the C64 in a similar casing.

» There were plenty of magazines available for C64 owners to choose from, including *Zzap!64*, *Commodore Format* and *Commodore User*.


Commodore 64 MicroComputer
High Resolution & Sound Synthesizer · Alta risoluzione grafica e sintetizzatore di suono
1541 DISK DRIVE OFFER FOR
FREE SOFTWARE WORTH £105·00 with Disk Drive.
See special Disk Drive packs for details
commodore COMPUTER

» There were a large number of different Commodore 64 packs available, with many featuring popular games of the time.

WHY IT'S COLLECTABLE

The first thing to realise when considering collecting for the Commodore 64 is that it isn't like *Pokémon*; you most certainly cannot catch them all. With an estimated 10,000 or more commercial titles released over the years, it adds up to a hell of a lot of games to track down. When taking that into consideration, along with accurate emulation via Vice and CCS, and the availability of devices such as the SD2IEC and 1541 Ultimate to play game images on real hardware, just why should people go to the trouble of collecting originals?

It is, admittedly, a very good question, and one with very good answers. First, there's the tangibility aspect to owning a set of cherished games; to be able to hold them in your hands, look at them and treasure them. Today, for so many people, a collection may amount to no more than an uncountable number of MP3s or video files stored upon a hard drive, whereas with a vinyl album or CD, a video tape or DVD, you tend to value and appreciate it more because it's a physical object. This is no different when it comes to computer games or videogames. In contrast to today's fairly uniform publishing world, there were quite a number of titles during the 1980s that had standout packaging or utilised a particular eye-catching style, such as the Infocom adventures, Electronic Arts' gatefold album homages or Broderbund's curiously hexagon-shaped box for *Centauri Alliance*.

The other main argument to this point is that there were a lot of complex games released for the C64, straddling genres as diverse as RPG, strategy, adventure and tech-heavy simulations. Each game's packaging – especially their manuals – were a vital component of the experience, and without them you would often be left swimming in the dark, not knowing what to do. Sure, they may be scanned and made available for reference, but it isn't quite the same as flicking through a thick paper-based book or glancing over large-sized printed maps, and they would more often than not be used for the copy protection look-ups. Games such as *Wasteland* even went as far as including false entries in the associated booklets to confuse possible cheaters!

Not everyone has the same reasons for collecting, and quite often they overlap. Many collectors tend to focus on particular genres, certain companies, or merely games they recall playing when they were younger. Needless to say, this proves to be a fairly popular approach, especially given the aforementioned perceived impossibility of obtaining everything ever released. The timeline of the C64 means that many of the kids who were battling alien invaders or conquering foreign lands now have children of their own, and for some it's a way to introduce what they loved to a new generation.

Some people just like to collect in general. Others will often focus on rare and hard to find titles in order to digitally preserve for distribution online. Myself? Well, I can honestly say all three of those apply and more, although I'm lacking in the children department currently. Sometimes there's nothing like the thrill of

» Electronic Arts' gatefold covers not only set them apart from other publishers, but also made them very collectible.

» One of the great things about collecting for the Commodore 64 is the sheer variety of box designs that are available.

DID YOU KNOW?

■ The C64 went through five revisions and two different case designs, with the most publicised difference being the output of the SID (sound) chip. Revision A machines are unreliable, but worth more; the C128 was Commodore's attempt to push its tech further, but is compatible in 64 mode with 99.9 per cent of software; the Commodore GS and Japanese MAX can really only play cartridges. Finally, the SX64 was the 'portable' playing option with a built-in disk drive and monitor.

the chase, or suddenly discovering a game you never knew about before and enjoying it. Games are still written for the C64 even today, the format thriving well after Commodore's bankruptcy, and although many are made available for free, some are published (by the likes of Cronosoft and Psytronik) for money, and in many cases, the entry fee is well worth paying, such as with *Newcomer* or *Knight 'n' Grail*.

Regardless of all the arguments, there will always be some people resolutely stuck to collecting only through digital means; if anything, it's a great way to try before buying if you're serious about collecting games you also want to enjoy playing. So, if you are still here, and still keen on acquiring C64 games, then where should you begin? The answer to that really lies in which genres you enjoy, because there is nothing that the C64 doesn't hold in spades, and a lot of the time collecting for the format will not set you back much money in the process.

The most noticeable dichotomy, however, was that most of the resource hogs such as simulations, RPGs and strategy titles came from the US, where owning a disk drive was a way of life, and most of the great arcade-orientated titles and quirky concepts came from Europe. Hence compared to Spectrum and Amstrad owners, C64 users literally gained the best of both worlds. Adventures, as it turned out, were split down the middle. On one hand there was the genius nature of much of Infocom's output, balanced against the tight, compelling works of Level 9 (*Gnome Ranger* and *Scapeghost*) and Magnetic Scrolls (*The Pawn* and *Guild Of Thieves*). Whichever way you saw it, there wasn't much on any of the other 8-bit computers to match them, and the versions released were just as good as the corresponding 16-bit incarnations.

If adventures were not your thing, then there was bound to be something else. Fighting games? *IK+*, *Way Of The Exploding Fist* and *Barbarian*. Racers? *Pitstop 2*, *Turbo Charge* and *Revs*. Puzzlers? *Zenji*, *Sokoban* and *Pipemania*. Platformers? *Impossible Mission*, *Mayhem In Monsterland* and *Monty On The Run*. Shooters? *Armalyte*, *Turrican*, and *Wizball*. RPGs? The *Bard's Tale* trilogy, *Ultima 4* and *Mars Saga*. Action adventure? *The Last Ninja*, *Project Firestart* and *Mercenary*. Strategy? *Laser Squad*, *Storm Across Europe* and *Germany 1985*. Simulation? *Gunship*, *Project Stealth Fighter* and *Silent Service*. Sports? *Microprose Soccer*, *TV Sports Football* and *Leaderboard*. Doesn't fit a genre? *The Sentinel*, *Citadel* and *Little Computer People*.

The relatively small amount of space here doesn't allow for a full dissection of the vast number of quality titles available, and there are many, many more for each genre listed above, collated in the list at the end of the article. The lack of regional lockout means buying games from abroad is relatively simple, and thankfully the majority of the best foreign titles were released in the UK, or the import versions work fine on PAL machines; **Retro Gamer** even has some handy advice over the page to help with this.

So what are you waiting for? Fire up the Commodore 64, turn on the disk drive and dive into a world of endless possibilities…

THE PERIPHERALS

EXCELERATOR +
"THE CD GAMES PACK"
30 GAMES ON CD – EVERYTHING INCLUDED
CD GAMES PACK
THE ACTION STARTS HERE
10 classic games on CD for the commodore 64
DAVID'S MIDNIGHT MAGIC from Broderbund
LEADER BOARD GOLF from Access
MISSION ELEVATOR from Softgold
IMPOSSIBLE MISSION from Epyx
DROPZONE from U.S. Gold
LODERUNNER from Broderbund
SOLOMON'S KEY from U.S. Gold
JINKS from Rainbow Arts
M.U.L.E. from Electronic Arts
FIST II from Melbourne House
+ 5 PIECES OF MUSIC from Chris Hülsbeck
Suitable for every C64 and normal CD player. Adapter included.
Rainbow Arts
M. U. L. E.
M. U. L. E.
from Electronic Arts
ariolasoft
COMMODORE 64
U.S. TOP 10 HIT

» According to Commodore, the disk drive was more expensive to manufacture than the C64 itself.

» Note the contrast between equivalent US and European releases of the same game.

THE DISK DRIVE

If there is one piece of hardware that you absolutely, positively need to play and collect C64 originals in this day and age, it's the Commodore's external disk drive. Most of the popular, collectable and in-demand titles were released on disk (thus avoiding the long loading times of tape), and there are plenty more that were unique to the format. Given that one will set you back around as little as £20 today – as opposed to the £150+ you would have to pay during the 1980s – then there's really no excuse either.

The original 1541 model can be discounted because of its bulky nature, weight and temperamental drive latch mechanism. The 1571 model is excellent, but you cannot take advantage of the extra features unless you have a C128 or are running disks created using a 1571. This leaves two main options on the table. Commodore's own 1541-II is solid, reliable, easy to open and clean, and does what it says on the tin. In the other corner resides the Excelerator+ produced by Evesham Micros, a clone drive that was every bit as good as the official thing, and perhaps even better in some respects.

Due to Commodore's insistence on sticking with a serial communication system, the speed of an ordinary disk drive is not that fast. Thankfully a few enterprising companies released kernal replacements such as Dolphin DOS, or cartridge-based fast loaders such as the Epyx Fastload, Cinemaware Warpspeed, and those present on Datel's Action Replay. Most original games published after 1984 came with a fast loader as standard, but for using with your own disks – or indeed any game without one – these options certainly take the strain out of waiting.

Speaking of fast loaders, a cautionary word should be given if you are looking to import disk-based Commodore 64 games. Thankfully, all bar one of the major C64 markets you are likely to buy from use PAL, with the exception obviously being the US. While there are no regional lockouts, there may be some issues when loading American games on a UK C64, but this isn't specifically because of the difference in television standards. In actual fact, the speed and timing of the disk drive is directly controlled by the C64 itself, and an NTSC machine runs at just over 1MHz whereas a PAL one runs at just under 1MHz, hence any copy protection or fast loader requiring extremely precise timing during the boot process will fail if run on the 'opposite' machine.

Caveat emptor, and all that; it certainly pays to do your research, especially if you also want to play the games in question once you've had them shipped over from the US. Strategy, RPG and simulation games from the likes of Origin and SSI are almost certainly compatible in the UK, along with releases by Synapse and Broderbund. Activision games are more than likely to work, but games from Electronic Arts, Epyx and Interplay tend to be around 50/50 on their chances. Furthermore, anything from Accolade is pretty much right out. If in doubt, ask for advice online at places such as Lemon64.

...AND THE REST

01. Action Replay cartridge

■ An Action Replay cartridge was an essential component of any C64 setup. With a wide range of features such as freezing and dumping memory to disk, hunting for cheat codes, copying files or merely acting as a disk fast loader, there was something for everyone. The last entry in the series, number six, is the best one to go for.

02. Expert cartridge

■ In contrast, the Expert cartridge was more for the serious enthusiast instead. It could act as a freezer and disk copier like the Action Replay, but also had an in-built machine code monitor and file converter. While publically attacked as a copy device, many programmers such as John Twiddy openly admitted to using the cartridge to assist them when working.

03. Protovision four-player adapter

■ The Protovision four-player adapter is one example of a user port-based extension to enable another two joysticks to be connected to the C64. Although mostly supported by newer software such as *Bombmania*, it can also be used with adapted older games, such as the beautiful *IK+ Gold* release that allows for three human players.

04. Magic Voice

■ The Magic Voice was a bold but failed attempt to add hardware-supported speech to games. It's only utilised by Commodore's conversions of *Wizard Of Wor* and *Gorf*, and is required to run *A Bee Cs*. Three games may not sound much, but it certainly adds something while playing the arcade titles.

05. Cartridge expansion board

■ Sometimes a C64 owner would have just too many useful cartridges, and an expansion board would be the ideal way to save wear and tear on the cartridge slot of the computer. Each slot has a switch beside it allowing them to be toggled on and off for booting on power-up.

06. TIB 3.5" drive

■ The TIB 3.5" drive was a failed attempt to give the smaller floppy media more market penetration. Despite the incredibly fast loading speeds due to the drive being connected through the cartridge port, users and publishers were reluctant to break from the 5.25" floppy format, and it was essentially dead at launch.

07. Datel Sound Sampler

■ The Datel Sound Sampler was a cheap, fun way to play with sound. Everything needed was included in the package, and once a sound was captured then echo, reverb or any manner of manipulation could be performed on it. Just a pity you couldn't save them out for later use.

64 The Collector's Guide

TOP 5 GAMES TO PLAY

The Sentinel

■ All powerful. All seeing. All absorbing. *The Sentinel* is arguably Geoff Crammond's finest moment, full of atmosphere, challenge and strategy across 10,000 levels.

Mayhem In Monsterland

■ The last great game of the original era, *Mayhem In Monsterland* showed the consoles that a humble 8-bit computer could produce a platformer just as good as they could.

Impossible Mission

■ 'Another visitor. Stay a while. Stay forever!' A fitting description of *Impossible Mission*, a perfect balance between risk and reward. If you fail, you only have yourself to blame...

Zak McKracken and the Alien Mindbenders

■ *Zak McKracken* was the second, and arguably better game produced using the SCUMM engine for the C64, and saw all manner of strangeness in your quest to prevent aliens from reducing Earth's intelligence.

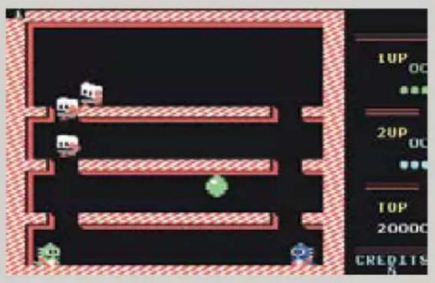
Last Ninja 2

■ *Last Ninja 2* was the greatest of the trilogy, with the best music and graphics. You even got to pretend to be a real ninja if the mask and rubber shuriken weren't confiscated!

PLAY THESE NEXT

IK+

■ Archer Maclean's sequel was a massive breath of fresh air to the fighting genre, and all he really did was add a third fighter. Actually, there was a lot more to it than that, with dazzling animation and intricately designed backgrounds that were full of life. A superb fighter that every C64 owner needs to play.



Bubble Bobble

■ The Commodore 64 had plenty of cracking arcade conversions, but this version of Taito's classic from Ste Ruddy was easily one of the best. Great chunky visuals, a stomping rendition of the original theme tune and all the main levels made for a frightfully authentic experience that left Spectrum and CPC owners fuming.

Paradroid

■ Andrew Braybrook was a master at making the C64 sing, and *Paradroid* is arguably one of his greatest efforts. Endlessly playable and ridiculously slick, it's a clever blend of genres that sees you taking control of the titular Paradroid and taking on a ship filled with dangerous robots. A true classic.

Project Firestart

■ Released by Electronic Arts in 1989, this epic adventure title may have borrowed elements from popular sci-fi films such as *Alien*, but it was so polished it really didn't matter. Huge in scope and years ahead of its time, it remains one of the C64's best action adventure games and really shouldn't be missed.

Armalyte

■ If you wanted to play decent shoot-'em-ups on an 8-bit computer you really needed a C64. Beautifully paced and featuring some truly stunning boss design and music, *Armalyte* is easily one of the best shooters on Commodore's hardware, and a must-play, even if you're not a hardened fan of the genre.

TOP 5 IMPORT GAMES

Ultima 1

While a little simplistic, the full package including maps and bag of coins is well worth hunting down. Prices have risen in the last couple of years though.

Avenger (MAX version)

■ The version released for the MAX computer in Japan. So much better than the obese invader attack that was released in the West, and quite a good conversion.

Castlevania

■ Konami NES games? On the C64?! You betcha. While not as good, it was certainly a cheaper way to play the game, and is guaranteed to make people double-take your shelves.

The Simpsons Arcade

■ This one surprises many people. Why Konami chose not to release it in Europe is a mystery. At the time it was a decent conversion, and still holds up fairly well today.

Oil Barons

■ If you're going to make a computer-assisted board game, then this is how to do it. Just look at it! The C64 kept track of all the facts and figures, leaving players to concentrate on strategy.

IMPORT THESE NEXT

Gyruss

■ For some reason now lost to history, this stunning port of Konami's excellent shooter was never released in the UK, something which is rather a pity. We'd urge you to track it down if you can though, for while the sprites look a little rough, the tight controls and super slickness more than make up for it. A truly impressive port.

Lost Tomb

■ Based on the old Stern coin-op, this is another highly impressive conversion that many European gamers will have never experienced. Similar in style to *Tutankham*, it involves you nipping around the tightly designed levels and grabbing as much loot as possible. Yet another excellent port that few gamers got to actually play.

Diamond Mine

■ An undiscovered gem, if you'll excuse the pun. Guide the mine trolley through the maze of dirt in many mines, collecting the diamonds and then returning to the home station. Like *Flicky*, you are rewarded with more bonus points for an ever-increasing line behind you, but watch out for the monsters who can steal all your gems!

Whistler's Brother

■ This is a clever little game from Broderbund, and quite possibly one of the earliest examples of using whistling as a fully-fledged game mechanic. A simple platformer of sorts, *Whistler's Brother* requires you to use whistles to direct your bookish brother around the game's 16 levels. An ingenious idea, well executed.

Space Taxi

■ Ignore the rather basic visuals and lose yourself in a ridiculously addictive action game as you fly your taxi around the 24 deviously designed stages. Limited fuel, thrusters and working landing gear all have to be mastered in order to become the best of the best, but it's so hard to put down you may well manage it.

TOP 5 RAREST PAL GAMES

The Great Giana Sisters

■ Infamous even today, it isn't as hard to find as you may think. Nonetheless, obtaining a copy of this *SMB* clone, especially on disk, may still run you a pretty penny.

Bounty Bob Strikes Back (disk version)

■ The tape version is easy to find but both US and UK disk versions are like hen's teeth. The US version is also in demand from 5200 owners, as the box is identical.

Gauntlet 3

■ Reviewed and never released, yet some copies slipped out somewhere – probably US Gold's own software club. It's good too, making it more frustrating that it's so hard to find.

Double Dragon (cartridge)

■ Not the rubbish Melbourne House conversion but an almost-as-bad second attempt by Ocean, released on cartridge. Never sold in shops, and not many people know about it.

Wizard of Wor (original art)

■ It's not the game; it's the box. There are but a handful of examples known of this English language release in existence, and why it was changed to the more familiar purple-robed wizard version is unknown.

GET THESE NEXT

Katakis

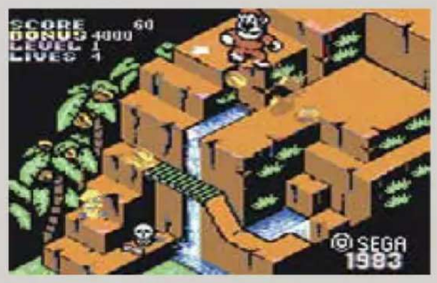
■ Rainbow Arts was well known for squeezing every last drop of useable memory out of the C64, and *Katakis* was no exception. Heavily influenced by Irem's *R-Type*, it fell foul of Activision and was re-released after several modifications as *Denaris*. Needless to say, the original version is now pretty hard to find.

Moonfall

■ A late C64 title, released by the company that Hewson transformed into, it combines aspects of *Mercenary* and *Elite*, along with wire-frame graphics, to produce an interesting, challenging exploration and shooting experience. For whatever reason, it barely hit the shops and hence is one of those great but hard to find games.

Block Hopper

■ Just by the name you can guess which arcade classic this is a blatant clone of, and whoever was charged with designing the inlay cover left nothing to the imagination either. The annoying thing is that it plays a pretty good game of *Q*Bert*, but is so hideously rare that we're liable to have another Pope before you see a copy.



Congo Bongo (disk)

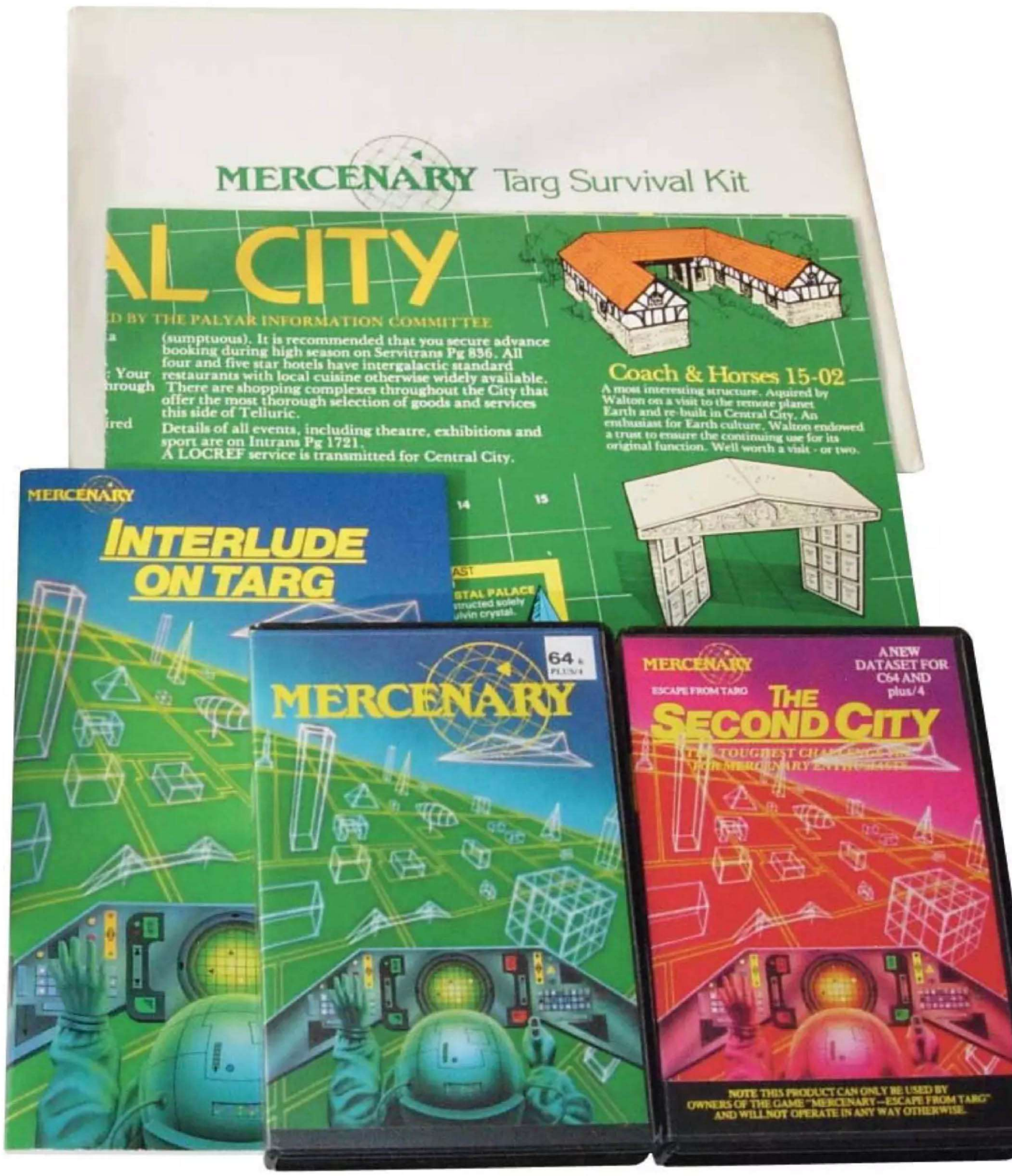
■ Ignore the tape-based version of Sega's isometric *Donkey Kong* clone and instead treat yourself to the disk version, which is a far superior offering, only let down by long loading times. Having said that, it's incredibly hard to track down, so expect to pay a pretty penny if and when you do finally manage to find it.

Satan's Hollow

■ Most of Commodore's arcade conversions were released on cartridge, but this one, oddly enough, only came out on disk. It's actually a pretty decent attempt to convert at the Bally/Midway original, which itself isn't that well known either. Evidently though, it couldn't have sold highly, and hence is fairly hard to find today.

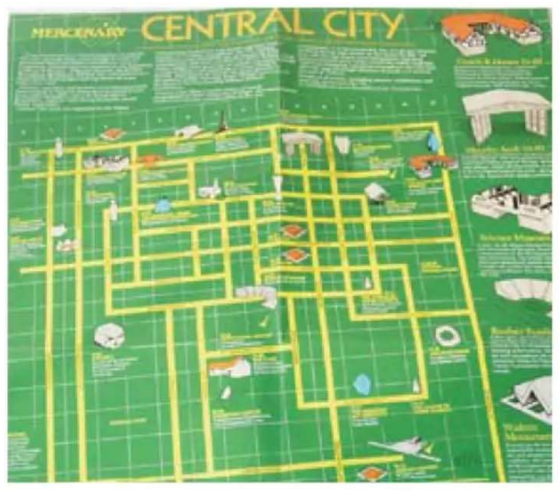
THE JEWEL IN THE CROWN

Big, brash boxsets were much more a Nineties console creation, but there are some snazzy-packaged C64 games out there. One such example is the Mercenary Compendium Edition...


MERCENARY Targ Survival Kit
AL CITY
D BY THE PALYAR INFORMATION COMMITTEE
(sumptuous). It is recommended that you secure advance booking during high season on Servitrans Pg 856. All four and five star hotels have intergalactic standard restaurants with local cuisine otherwise widely available. There are shopping complexes throughout the City that offer the most thorough selection of goods and services this side of Telluric.
Details of all events, including theatre, exhibitions and sport are on Intrans Pg 1721.
A LOCREF service is transmitted for Central City.
Coach & Horses 15-02
A most interesting structure. Aquired by Walton on a visit to the remote planet Earth and re-built in Central City. An enthusiast for Earth culture, Walton endowed a trust to ensure the continuing use for its original function. Well worth a visit - or two.
MERCENARY
INTERLUDE ON TARG
MERCENARY
64
MERCENARY
ESCAPE FROM TARG
THE SECOND CITY
A NEW DATASET FOR C64 AND plus/4
NOTE THIS PRODUCT CAN ONLY BE USED BY OWNERS OF THE GAME "MERCENARY – ESCAPE FROM TARG" AND WILL NOT OPERATE IN ANY WAY OTHERWISE.

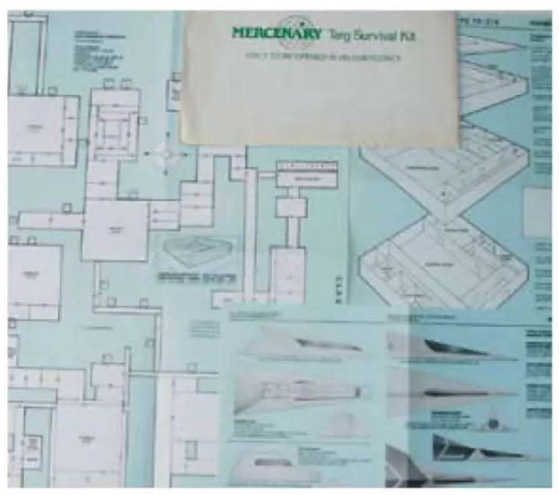
The Games

■ Inside, this special edition pack contains the original Commodore 64 version of *Mercenary* as well as the *Second City* expansion, along with a short novella that, if you read it closely, offers some hints about how to succeed in the game.



The Map

■ A large-scale map plots out the main attractions of Targ's main city, providing interesting details and facts not mentioned in the game, as well as one or two in-jokes. It's essential for planning a way to escape the planet with your pockets full of loot.



The Survival Kit

■ The Survival Kit is basically a set of blueprints, and has several useful layouts of the game's underground networks, including the location of the lift accesses. Aside from the one where the Winchester drive resides, of course...

Special thanks to Mark Ambrose for kindly allowing us to use his Commodore 64s and Jason Kelk for his TIB drive

64 The Collector's Guide

THE C64 GAMES YOU NEED TO OWN

- Action Biker
- Alien 3
- Alien Syndrome
- Aliens (UK Version)
- Alter Ego
- American 3D Pool
- Ancipital
- Apollo 18
- Archon
- Arkanoid
- Armalyte
- Arnie
- Atomino
- Avenger
- Ballblazer
- Barbarian
- Bard's Tale, The
- Barry McGuigan's World Championship Boxing
- Batalyx
- Batman: The Caped Crusader
- Battle Chess
- Battle Command
- Battle Valley
- Beach Head
- Beach Head 2
- Below The Root
- Beyond The Forbidden Forest
- Bionic Command (UK Version)
- Blue Max
- BMX Kidz
- BMX Simulator
- Bobby Bearing
- Borrowed Time
- Boulder Dash
- Bounder
- Bounty Bob Strikes Back
- Bruce Lee
- Bubble Bobble
- Buck Rogers: Countdown To Doomsday
- Bug Bomber
- Buggy Boy
- Cabal (UK Version)
- California Games
- Centauri Alliance
- Champions Of Krynn
- Chip's Challenge
- Choplifter
- Citadel

Entombed

IK+

- CJ's Elephant Antics
- Combat School
- Crazy Comets
- Creatures
- Creatures 2
- Cyberball
- Cybernoid
- Dan Dare
- Dark Side
- Death Knights of Krynn
- Defender Of The Crown
- Diamond Mine
- Doomdark's Revenge
- Dragon Wars
- Dragonsden
- Driller
- Dropzone
- Druid
- Eidolon, The
- Elvira 2
- Emlyn Hughes' International Soccer
- E-Motion
- Encounter
- Enforcer
- Entombed
- Exile
- Fiendish Freddy's Big Top O' Fun
- First Samurai
- Fourth Protocol, The
- Frankie Goes To Hollywood
- Gauntlet II
- Gauntlet III
- Ghostbusters
- Ghouls 'N' Ghosts
- Grand Prix Circuit
- Great Giana Sisters, The
- Green Beret
- Gremlins
- Gribbly's Day Out
- Guardian
- Guild Of Thieves
- Gunship
- Gyruss
- Hacker
- Hardball
- Hawkeye
- Head Over Heels
- H.E.R.O.

- Hitchhiker's Guide To The Galaxy, The
- Hunter's Moon
- Hyper Sports
- I, Ball
- IK+
- Ikari Warriors
- Impossible Mission
- Impossible Mission 2
- International 3D Tennis
- International Soccer
- Into The Eagle's Nest
- Iridis Alpha
- Iron Lord
- Ivan 'Ironman' Stewart's Super Offroad
- Jumpman
- Juno First
- Kamikaze
- Katakis
- Kikstart 2

The Last Ninja 2

- Knight 'N' Grail
- Koronis Rift
- Laser Squad
- The Last Ninja
- Last Ninja 2, The
- Leaderboard
- Legacy Of The Ancients
- Lemmings
- Little Computer People
- Lode Runner
- Lords Of Chaos
- Lords Of Midnight, The
- Lotus Esprit Turbo Challenge
- Magic Candle, The
- Mancopter
- Maniac Mansion
- Mars Saga
- Master Of Magic
- Mayhem In Monsterland
- Mega Apocalypse
- Mercenary
- Microprose Soccer
- Mission Elevator
- Montezuma's Revenge
- Monty On The Run
- Moon Patrol
- M.U.L.E.
- Myth: History In The Making
- Nam/Vietnam

EXTREMELY RARE Games that have less than a few dozen known copies available.

VERY RARE Very hard to come by. Expect to see only a couple of copies per year.

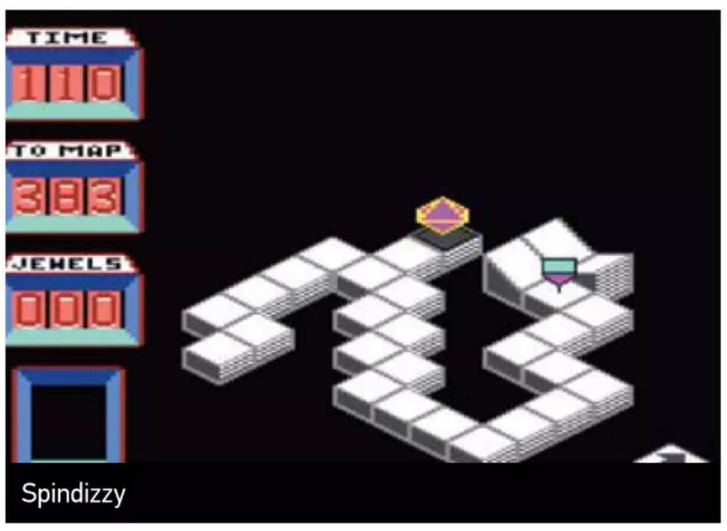
RARE You should be able to source these in a reasonable amount of time.

UNCOMMON You won't find them straight away, but you will after a search.

COMMON Always just a click away for the average collector.

VERY COMMON So common you'll find them in most bundles of games you buy.

- ☐ Navy SEALS
- ☐ Nebulus
- ☐ Neuromancer
- ☐ Newcomer
- ☐ Night Shift
- ☐ Ninja Spirit
- ☐ OutRun Europa
- ☐ Pac-Land
- ☐ Pac-Mania
- ☐ Pang
- ☐ Paradroid
- ☐ Parallax
- ☐ Park Patrol
- ☐ Pastfinder
- ☐ Pawn, The
- ☐ Pistop 2
- ☐ Platoon
- ☐ POD
- ☐ Powerplay
- ☐ Project Firestart
- ☐ Project Stealth Fighter
- ☐ PSI-5 Trading Company
- ☐ Raid On Bungeling Bay
- ☐ Raid Over Moscow
- ☐ Rainbow Islands
- ☐ Revenge Of The Mutant Camels
- ☐ Revs
- ☐ Rick Dangerous
- ☐ Robocop 3
- ☐ Rocket Ranger
- ☐ Rodland
- ☐ Rollaround
- ☐ Samurai Warrior
- ☐ Scapeghost
- ☐ Scarabaeus
- ☐ Sentinel
- ☐ Sentinel, The
- ☐ Seven Cities Of Gold
- ☐ Shadowfire
- ☐ Sheep In Space
- ☐ Skate Or Die
- ☐ Slayer
- ☐ Sleepwalker
- ☐ Slicks
- ☐ Smash TV
- ☐ Space Crusade



Spindizzy

- ☐ Space Rogue
- ☐ Space Taxi
- ☐ Speedball
- ☐ Speedball 2
- ☐ Spelunker
- ☐ Spindizzy
- ☐ Spore
- ☐ Spy Hunter
- ☐ Spy Vs Spy
- ☐ Star Paws
- ☐ Starcross
- ☐ Steg The Slug
- ☐ Storm Across Europe
- ☐ Stormlord
- ☐ Strike Fleet
- ☐ Stunt Car Racer
- ☐ Summer Games 2
- ☐ Super Pipeline 2
- ☐ Super Sunday
- ☐ Supremacy
- ☐ SWIV
- ☐ Tank Attack
- ☐ Tass Times In Tonetown
- ☐ Tau Ceti
- ☐ Temple Of Apshai Trilogy
- ☐ Tenth Frame
- ☐ Tetris
- ☐ They Stole A Million
- ☐ Thing On A Spring
- ☐ Thrust
- ☐ Time Machine
- ☐ Times Of Lore
- ☐ Toy Bizarre
- ☐ Tracksuit Manager
- ☐ Trailblazer
- ☐ TRAZ
- ☐ Turbo Charge
- ☐ Turrican
- ☐ Turrican 2
- ☐ TV Sports Football
- ☐ Ultima 4
- ☐ Untouchables, The
- ☐ Uridium
- ☐ Warhawk
- ☐ Wasteland
- ☐ Way Of The Exploding Fist, The
- ☐ Whistler's Brother
- ☐ Who Dares Wins 2
- ☐ Wings Of Fury
- ☐ Wizard
- ☐ Wizard of Wor
- ☐ Wizball
- ☐ World Games
- ☐ Zak McKracken And The Alien Mindbenders
- ☐ Zenji
- ☐ Zig Zag
- ☐ Ziods
- ☐ Zolyx
- ☐ Zone Ranger
- ☐ Zork

Collector Q&A

In addition to his insane knowledge of the system, Mat Allen also has a rather impressive collection...

What drew you to start collecting for the C64?
Actually, you could say I started right from the moment I got a C64 because I've barely let go of anything in more than 25 years. There's probably an inherited packrat gene from my father somewhere in the mix!

How long have you been collecting so far?
During the Nineties, I went on a bit of a pursuit via various mail order firms to fill a lot of gaps in my collection, so that's probably when it really began. The cartridge interest started in 2000 when I worked on the C64 section for the Digital Press website.

Why did you buy the games you have so far?
Originally it was to acquire games I hadn't bought or played during the Eighties, especially on disk as I was a late owner in that respect. Later on it was games I only just discovered, and games that needed digitally preserving for projects such as Gamebase64.

What advice do you give to potential collectors?
Don't go wild, unless you're trying to fill a lot of gaps at the same time. With so many games out there, pick and choose the ones you wish to obtain, be it titles from a certain company, genre or style. My original criteria was most games given over 80% in *Zzap!64* that I didn't own!

What is the cornerstone of your collection?
That's like asking to pick a favourite child. Obtaining the *Crystal Castles* prototype cartridge was a coup. *Double Dragon* on cartridge and *Gauntlet III* are up there as well.

What would you say is the hardest game to find that you've bought?
I've got quite a few one-offs here, mostly on cartridge. Getting some of the Japanese MAX and Polish titles was a lesson in good fortune, and being in the right place at the right time. And I must say thanks to Andy 'Thalamus' Roberts for selling me the copy of *Gauntlet III*.

What is the most you've spent on any one title?
Surprisingly not that much, compared to other systems I collect for. The most was probably £150 for one of the Dinamic cartridge titles. There have been a few others approaching that figure, but that is the highest.

What are you still missing?
I'm still looking for an original of *Chuck Rock*. If it even exists, as no one I know even owns it. Aside from that, a Japanese C64 as well.

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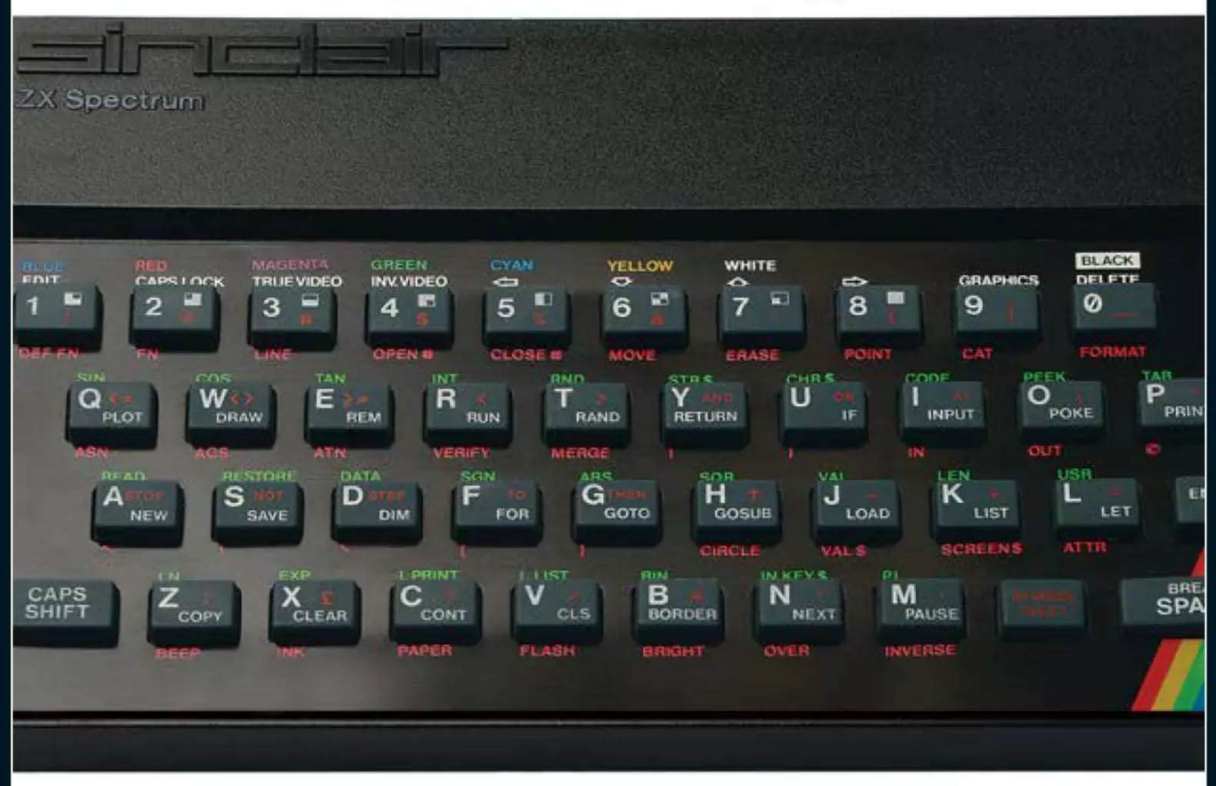

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Even after more than 30 years since their respective launches, the ZX Spectrum and the Commodore 64 maintain a special place in the hearts and minds of retro gamers everywhere. In this new edition of our collector's guide, we've selected the very best Spectrum and C64 content from Retro Gamer to put together the definitive guide to the games, the hardware, and the people that made the systems so phenomenally successful.

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